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Coronavirus Update

As of the end of July, 153 non-multiplex giant-screen theaters were open to the public, 73% of the total of 210. This is a 68% increase over the 91 that were open when we last checked in early March (*see Feb.-March* 2021). Twenty-two institutions with GS theaters have reopened at least partially, but without reopening their theaters. The remaining 35 institutions are still closed, or we were unable to determine their status.

In late July, Imax Corporation CEO **Richard Gelfond** reported that about 90% of the world's 1,654 IMAX theaters (roughly 1,489) have reopened, and that 95% of North American IMAX screens are open (approximately 470).

In June and July things seemed to be getting back to normal in the West, and it looked as if the COVID nightmare might be behind us. However, in late July, at about the same time we were surveying theaters, the Delta variant of COVID-19 began spreading more quickly in North American and western Europe, and authorities began urging people to take greater precautions as the science indicated that it was more contagious than earlier strains.

Although we are not aware of any GS theaters or institutions that have reclosed in the last month because of the surge of new cases since mid-July, it is possible that such closures are in the offing.

Inside *LF Examiner*

GSCA Virtual 2021 Conference Preview	2
Shorts	3
Premiering This Summer	7
Remembrances of Graeme Ferguson	8
In Production	12–13
The Biz	18–19
Bookings	20–21

In Memoriam: Imax Co-founder Graeme Ferguson

Graeme Ferguson, filmmaker, co-inventor of the IMAX film format, and co-founder of Imax Corporation, died on May 8, 2021, at age 91, after being diagnosed with throat cancer in 2020. **Phyllis Ferguson**, his wife of 42 years, died eight weeks earlier (*see LF Examiner, April 2021*).

In the late 1960s, Ferguson, along with fellow filmmaker **Roman Kroitor**, business manager **Robert Kerr**, and engineer **William Shaw**, invented the 15-perf, 70mm motion picture format, developed the cameras and projectors to capture and display it, and founded the company that would introduce it to the world as IMAX at Expo '70 in Osaka, Japan. Although other alternative giant film formats preceded it (e.g., **Cinerama**) and followed it (8/70), none was as successful or as widely adopted as 15/70. Nearly 450 15/70 projectors were installed between 1970 and 2011, and at its peak in 2008, 306 theaters were projecting 15/70 film.

But the accomplishments of Ferguson and Kroitor were not merely technical. They (and other filmmakers such as **Roger Tilton**, **Greg MacGillivray**, and **George Casey**) created a new art form, now known as giant-screen cinema, but for decades simply called IMAX. Recognizing that this new immersive format was unlike any previous form of cinema, Ferguson and the others developed new techniques that gave audiences an unprecedented and powerful you-are-there experience that remained unsurpassed for decades. Ferguson's vision, influence, and contributions to the medium are arguably the greatest among all of the format's leading filmmakers.

Ivan Graeme Ferguson was born in Toronto on Oct. 7, 1929, the oldest of four children. He became interested in photography at age 7, when his parents gave him a Baby Brownie still camera and a 25-cent weekly allowance that was just enough to buy one roll of film. (They agreed to pay for processing.) By the time he was 10 his parents had bought him a Keystone 8mm film camera.

The Fergusons lived in Galt, ON, about 60 miles west of Toronto, where Graeme attended the public schools in which he met Kerr, Shaw, and Shaw's future wife, Barbara. He enrolled at the University of Toronto in 1948 to study political science and economics, but found himself much more interested in his extra-curricular activities with the school's film society. It was during a summer program at the National Film Board that Ferguson first met Kroitor.

At university Ferguson also met avant-garde filmmaker **Maya Deren**, who urged him to become an artist rather than go into economics after graduating. As Ferguson told *LF Examiner* in 2002, the suggestion "changed my view of my life overnight."

(In the 1940s, Deren had worked with and been married to **Alexander Hammid**, who would later produce the Oscar-winning multi-image film ***To Be Alive!*** with partner **Francis Thompson** for the 1964-65 World's Fair in New York, and the ground-breaking IMAX film, ***To Fly!*** in 1976.)

By the late 1950s, Ferguson was married and living in New York City, working as a freelance director, cinematographer, and editor. He was editor for the early '60s TV series *Silents Please,* as well as for the 1960 short *A Bowl of Cherries*, and was cinematographer on the Oscar-nominated documentary *Rooftops of New York*

*(see **FERGUSON** on page 4)*

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GSCA Virtual 2021 Conference Preview

The Giant Screen Cinema Association will hold its 2021 conference virtually on Sept. 20, 22, and 24. The meeting will include presentations on 15 new films, 12 films in production, and three films in development. There will also be four professional development sessions, an Innovations Session, and a featured speech by **Louis Alfieri** of Raven Sun Creative.

The meeting will kick off with an awards and recognition presentation.

The conference will be held on the Filmocracy online platform the GSCA used for its spring 2021 virtual meeting, which will allow participants to screen all new films in their entirety at any time between Sept. 13 and Oct. 1. The live New Films sessions during the conference week will be 15-minute presentations by producers and distributors to their films' subject matter, marketing plans, etc.

GSCA policy allows projects to appear as "New Films" at three meetings; only two of the titles below are being seen in their entirety for the first time at this conference: ***The Last Glaciers*** and ***Wings Over Water***.

New Films

Title	*Production Co.*
Ancient Caves*	**Oceanic Research Group**
Antarctica*	**BBC Studios Natural History Unit**
The Arctic: Our Last Great Wilderness*	**Terra Mater Factual Studios**
Astronaut: Ocean to Orbit*	Oceanic Research Group
Cephalopods: Aliens of the Deep	**Saint Thomas**
Dino Dana: The Movie*	**Sinking Ship Entertainment**
Dinosaurs of Antarctica*	**Giant Screen Films**
Everest*	**MacGillivray Freeman**
Into America's Wild*	MacGillivray Freeman
Ireland	MacGillivray Freeman
*The Last Glaciers***	**Leeson Media**
Ocean Odyssey	**Wild Pacific Media**
The Search for Snow*	**Ouragan Films**
Serengeti	**Definition Films**
*Wings Over Water***	**Dorsey Pictures**

* In release
** First time as New Film

A 75-minute session will feature presentations on the Films in Production and Films in Development.

Films in Production

Title	*Production Co.*
Dune*	**Legendary Pictures**
Eternals*	**Marvel Studios**
K2 Project TBA*	Definition Films
Koala	**Amezdroz Media**
Mars 2080	**Imagine Entertainment**
No Time to Die	**Metro-Goldwyn-Mayer**
Ocean Race: Racing for the Planet	**Blue Sky Aerial**
Sand-Eating Sharks	Saint Thomas
Secret World of Fungi	**Stranger Than Fiction Films**
Secrets of the Sea	Oceanic Research Group
Tiger Tiger	**White Mountain Films**
Top Gun: Maverick	**Paramount**

* First appearance at a GSCA conference

Films in Development

Title	*Production Co.*
Enchanted Greece	White Mountain Films
Endlings*	Sinking Ship Entertainment
Florida: Wild at Heart*	**Grizzly Creek Films**
Jet Force Nine	**Speedbird Productions**

* First appearance at a GSCA conference

Sessions

The four professional development sessions will cover "New Content and New Ways to Program," "Marketing-Focused Social Media," "New Directions in Giant Screen Films," and "Theater Reopening Tips and Best Practices." The hour-long Innovations Session will deal with "The Art of the Digital Intermediate," "Using VR to Test and Review Content for the Giant Screen and Domes," and "Helicopters, Planes, and Drones: Only the Best Tool Will Fly!"

For more information, and to register, visit giantscreencinema.com. Early registration (at a reduced rate) ends on Aug. 20.

Monday, September 20

Time (EDT)	*Session*
11:00 am - 12:00 pm	Welcome remarks, Awards and Recognition
12:00 pm - 1:00 pm	Featured guest speaker: Louis Alfieri
1:15 pm - 1:30 pm	Film 1: *Antarctica*, SK Films
1:30 pm - 1:45 pm	Film 2: *The Arctic*, Cosmic
1:45 pm - 2:00 pm	Film 3: *Into America's Wild*, MFF
2:15 pm - 2:30 pm	Film 4: *Ancient Caves*, MFF
2:30 pm - 2:45 pm	Film 5: *Dinosaurs of Antarctica*, GSF
2:45 pm - 4:00 pm	Films in Production/Projects in Development

Wednesday, September 22

Time (EDT)	*Session*
11:00 am - 12:00 pm	Session: New Programming
12:00 pm - 12:30 pm	Round table discussions
12:45 pm - 1:00 pm	Film 6: *Cephalopods*, nWave
1:00 pm - 1:15 pm	Film 7: *Wings Over Water*, SK Films
1:15 pm - 1:30 pm	Film 8: *Ocean Odyssey*, K2 Studios
1:45 pm - 2:00 pm	Film 9: *Ireland*, MFF
2:00 pm - 2:15 pm	Film 10: *Astronaut: Ocean to Orbit*, MFF
2:15 pm - 2:30 pm	Film 11: *Everest*, MFF
2:30 pm - 3:45 pm	Session: Marketing Focused Social Media
3:45 pm - 5:00 pm	Happy hour

Friday, September 24

Time (EDT)	*Session*
11:00 am - 12:00 pm	Innovations Session
12:00 pm - 12:30 pm	New Directions in Giant Screen Films
12:45 pm - 1:00 pm	Film 12: *The Search for Snow*, nWave
1:00 pm - 1:15 pm	Film 13: *Dino Dana The Movie*, Sinking Ship
1:15 pm - 1:30 pm	Film 14: *Serengeti*, K2 Studios
1:30 pm - 1:45 pm	Film 15: *The Last Glaciers*, Imax Corporation
2:00 pm - 2:45 pm	Session: Theater Re-Opening Tips and Best Practices, Wrap up

The schedule is subject to change.

SHORTS

Syracuse drops IMAX for D3D

The Milton J. Rubenstein Museum of Science and Technology (MOST) in Syracuse, NY, is replacing the IMAX film projector in its 24-year-old Bristol Omnitheater with a Cinedome system from D3D Cinema, set to open in February 2022. The three-projector laser system will have a resolution of 6K, and is similar to systems D3D has installed in Chicago, Cleveland, OH, and Mobile, AL.

The theater closed in July to begin the removal of the dome skin, seats, and carpet; renovations to the lobby and the new media lab being built in the glassed-in projection booth below the theater will begin in October. Replacement of the theater's existing dome skin, sound and lighting systems, seats, and carpets will begin in December, according to a timeline on the museum's Web site. The budget for the project is $2.3 million.

MOST opened in a Syracuse storefront in 1981 and moved to its present location, a former armory, in 1992. The Bristol Omnitheater, a 65.5-foot (20-meter), 214-seat IMAX Dome theater, was constructed inside the building in 1997. The museum closed for the pandemic in March 2020, reopening with capacity restrictions in August 2020. The theater closed again in October.

Shanghai Astronomy Museum opens

In July, the world's largest astronomy museum opened in Shanghai, China, with 420,000 square feet (39,000 square meters) of exhibit space and a 75.5-foot (23-meter) Spitz Nanoseam dome housing an Evans & Sutherland Digistar 7 fulldome system powered by 20 Sony 4K laser projectors that create a 14K image. A second Digistar system with two Sony projectors is installed in a 56-foot (17-meter) dome used as a science and art installation.

Designed by Thomas J. Wong of Ennead Architects, the elliptical building features an oculus, an opening above the main entrance that projects an orb of sunlight that indicates the time of day. The planetarium is in a huge metal sphere that

Ennead Architects

Planetarium of the Shanghai Astronomy Museum.

appears to float within the building. (Ennead also designed the similarly structured Rose Center for Earth and Space in the **American Museum of Natural History** in New York.)

Correction

The caption of the photograph of the crew of ***Train Time*** on page 6 of the April issue was inaccurate. It should have read: "L to r: Director Stephen Low with the IMAX film camera, and first assistant camera Philippe Prud'homme and key grip and master rigger Derek Teakle with the Sony F65 digital camera."

Illuminarium opens in Atlanta

Illuminarium, a new immersive digital projection experience, opened in Atlanta on July 1. The attraction features two large rooms (one equipped with a bar) in which 4K digital images are projected on walls 22 feet (6.7 meters) tall. According to the company, "In *WILD: A Safari Experience*, you will be transported to the majestic landscapes of the African continent and come face-to-face with the exotic animals most can only hope to catch a glimpse of on safari. Strobe effects, gentle floor vibration, immersive sound, and realistic and responsive projection are all part of the experience."

Based in Atlanta, Illuminarium was founded by **Alan Greenberg**, formerly publisher of *Esquire* magazine and founder of Travel Holdings, a global interactive travel distribution firm. Additional Illuminarium venues are planned for Las Vegas at the end of 2021, Miami in 2022, with other international sites in the works. Greenberg was quoted in the media as saying "We hope that five or six years from today, there'll be 50 Illuminariums."

Arctic and Antarctica nominated

Two GS films have been nominated for awards in the 2021 Jackson Media Awards, which will be presented at the Jackson Wild Summit, Sept. 27–Oct. 1, 2021, in Jackson Hole, WY.

The Arctic: Our Last Great Wilderness, from Terra Mater Factual Studios and Cosmic Picture, is nominated in the Educational/Informational category. And ***Antarctica***, produced by BBC Studios Natural History Unit and distributed by SK Films, has been nominated in five categories: Ecosystem – Long Form, People & Nature – Long Form, Educational/Informational, Cinematography, and Original Music Score.

GS producers also nominated for non-GS productions include BBC Studios, Howard Hall Productions, NHK Educational Corporation, and Terra Mater Factual Studios.

Pandorama lands in Oz

The only 15/70 print of artist and cartoonist Nina Paley's hand-drawn GS film, *Pandorama* (2000), has been adopted by Australia's IMAX Theatre Melbourne. After *LFX* published an appeal in the March 2021 issue for a 15/70 theater to take possession of the print, Melbourne's **Richard Morrison** reached out to Paley and **Ingrid Lae**, formerly with Science World in Vancouver, BC, Canada, which had briefly distributed the film as part of a collection of GS shorts Lae assembled in 2007.

After Lae arranged to make a digital version of the original 35mm mag film sound track, she shipped the print and track to Melbourne, where Morrison hopes to be able to screen it later this year.

Our thanks to Lae and Morrison for helping to preserve this unique piece of GS history.

In Memoriam: Graeme Ferguson

*(from **FERGUSON** on page 1)*

(1961). He wrote and directed the documentary *The Legend of Rudolph Valentino* (1961) and directed the 1962 feature *The Seducers*. In 1965 he wrote and produced *The Love Goddesses*, a documentary about Hollywood's portrayals of women and sex through the decades. In 1968, with comedian Severn Darden and other members of the Second City improv group, he wrote and directed his second conventional feature, a satire called *The Virgin President.*

Origins of IMAX

But before that Ferguson was asked to produce a film for the Man the Explorer pavilion at **Expo 67** in Montreal, with the mandate that it be a multi-screen film, thanks to the popularity of *To Be Alive!* and other expanded-cinema presentations at the New York fair. ***Polar Life***, a *cinéma vérité* look at the lives of northern peoples in Canada, Lapland, and Siberia, featured eleven 35mm screens and a continuously rotating audience platform divided in four sections so that two sections of the audience would see about three screens at once while the other two were loading and unloading.

Elsewhere in the Expo, Hammid and Thompson made the six-screen ***We Are Young!*** for the Canadian Pacific Railway pavilion, while Kroitor and **Colin Low** made ***Labyrinth***, a signature attraction of the fair, featuring two unconventional multi-screen cinemas with a maze-like passage between them. Ferguson and Kroitor (who had married Graeme's sister, Janet) saw each other's works in progress, offered comments and suggestions, and shared their frustrations with the technologies they were using.

Maintaining the synchronization of multiple film projectors running continuously throughout the day posed serious technical challenges. In the summer of 1967, after the pavilions were up and running and most of the bugs had been worked out, the two filmmakers discussed better alternatives. As Ferguson told *LFX* in 2002:

"Roman and I were having a drink before dinner at his house, and we said to each other, there ought to be a way to make a cinema, like one of these pavilions with an expanded screen. It should have a very large screen, it should have a single projector, and the audience should sit as close to the screen as possible. The main thing is it should have a standardized projection system and film format so that the same show can be shown in multiple communities.

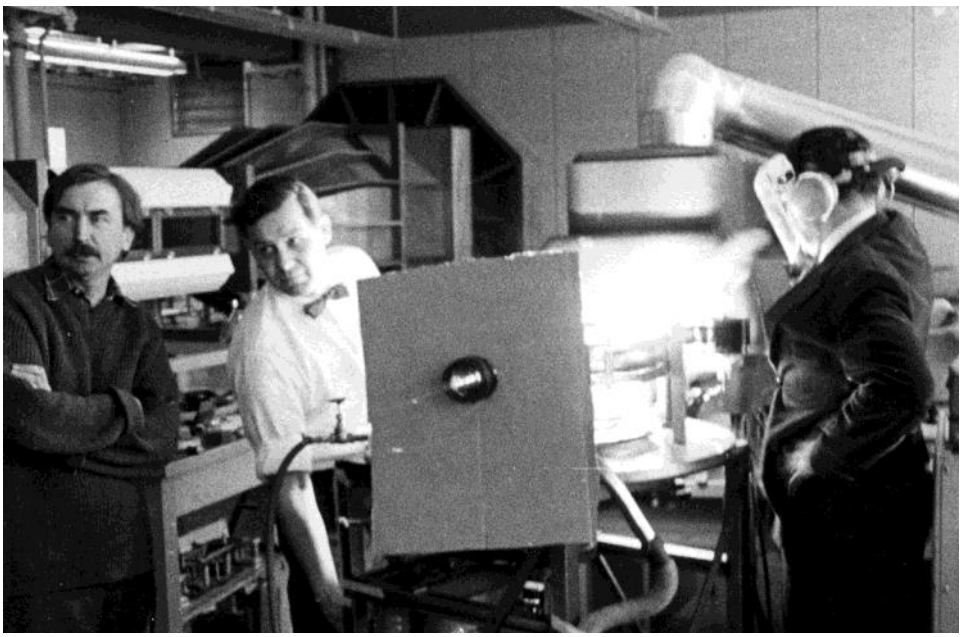
"In that first discussion, we saw [the new projection system] as a way of projecting multi-image films, and we quite soon called it Multivision. The first discussion was certainly under an hour, maybe about half an hour.

"The basic idea was to take Roman's third chamber in *Labyrinth*, which had five 35mm screens in the shape of a cross, add in the other four [in the corners] so now you had a large screen that would look as if it was projected with nine 35mm projectors, three up and three across. If you know anything about film technology, you look at it and say you can put that on a piece of 70mm moving horizontally, and it will come out to be about 15 perfs across. We knew that in the first discussion."

Within weeks they had brought in Kerr as business manager and each of them invested $700 to form the company, first called Multiscreen Corp., to develop the new system. "We had two filmmakers, which was one too many, one businessman, which was right, and we were one short in the engineering department. We said to each other, 'Who's the best engineer we could hire?' And it took us about one tenth of a second to say, 'Bill Shaw.'"

Over the next two-and-a-half years, Ferguson, Kroitor, Kerr, and Shaw would invent the 15/70 film format, commission the first 15/70 camera, build the first 15/70 rolling loop projector, produce the first giant-screen film, and open the world's first IMAX theater at Expo '70 in Osaka.

Although it was technically the first IMAX theater, the Fuji Pavilion was not typical of what the creators had envisioned for the format. The screen was relatively small — 40x60 feet (12x18 meters) — at one end of a large air-supported structure, on the walls of which slides were projected. The audience entered and stood on a rotating ring watching the imagery that surrounded them. The non-linear, 16-



L to r: Roman Kroitor, Bill Shaw, and Robert Kerr testing the first IMAX projector at McMaster University..

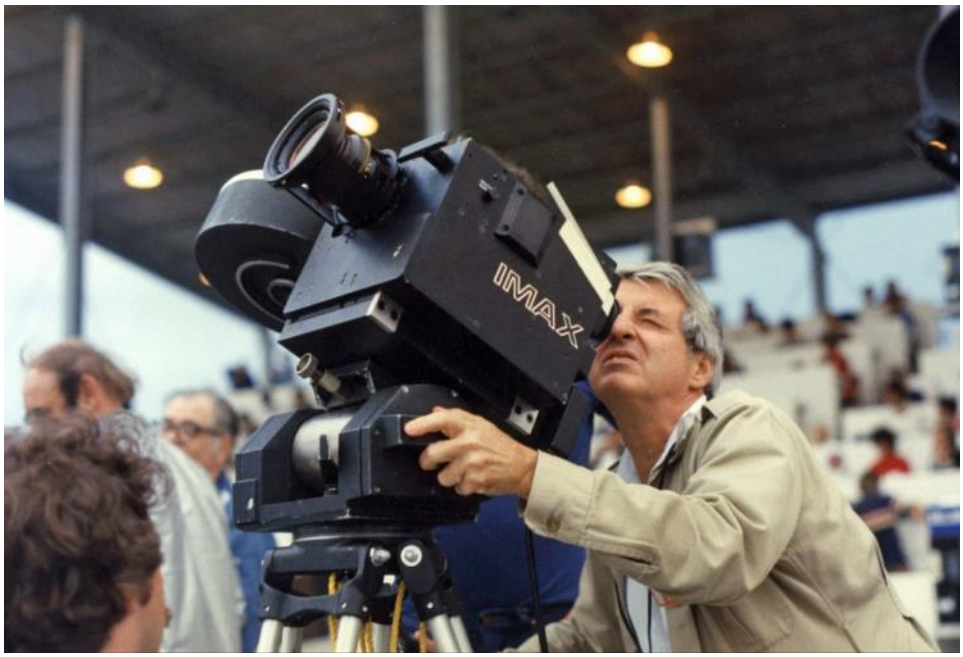
minute multi-image film, ***Tiger Child*** (directed by **Donald Brittain**) ran continuously, with several prints spliced together on the platter; the slide show continued during the time it took to rewind every hour.

The founders had been constrained by the requirements of their Expo '70 sponsor, but they still wanted to build a theater that embodied the design elements they had outlined in the summer of 1967. After the Expo, with the fate of their small company in jeopardy, they learned that the province of Ontario was planning a large park on the lakeshore in Toronto that was to include a multi-media theater in a distinctive geodesic dome. They reached a deal with park officials to buy the Osaka 15/70 projector, which projected onto a large flat screen — dome screens would come later — and Ferguson was commissioned to make ***North of Superior***, which opened at Ontario Place's 800-seat Cinesphere on May 22, 1971.

Unlike *Tiger Child*, which was almost entirely multi-image, with only a few full-frame shots, *North of Superior* was the reverse: almost entirely full-frame; one of the only panel shots was the memorable opening in which a small window flying over a lake dramatically expands to fill the giant screen. Despite Ferguson's interest in multi-image cinema, the tight production schedule and limited budget precluded the extensive use of opticals.

At first, Cinesphere's programming alternated between IMAX and other conventional films that had been made for the park, but *North of Superior*'s popularity soon pushed the other shows off the schedule. In a 2004 interview with *LFX*, Ferguson admitted that it was unfair to those films, which he said were "pretty good," but "people lined up for hours to see *North of Superior.*"

The Cinesphere provided the showcase for the format that the founders had been seeking. Recognizing that they needed a significant number of theaters in place to make producing films viable, they hoped to find a visionary investor who would put up $100 million to start doing both. They began bringing Hollywood filmmakers, studio executives, and theater operators to Toronto to experience IMAX. All were thrilled, especially the filmmakers.



Ferguson filming the first launch of Space Shuttle Columbia for Hail Columbia! *Gord Harris' head is at left.*

Director **William Friedkin**, coming off his successes with *The French Connection* and *The Exorcist*, told Ferguson that Universal would let him do anything he wanted, including making a film in a revolutionary new format; producer **Irwin Allen** (*The Poseidon Adventure, The Towering Inferno*) also thought he might have enough clout for such a move. But in the end, studios wouldn't fund an IMAX feature without at least 20 screens in major marketS, and they were prevented by a 1948 court ruling from building and operating theaters themselves. Conversely, theater chains needed to be assured of a continuous flow of films. It was the classic "chicken-and-egg" problem.

Ferguson hoped that **Disney** might include an IMAX theater at EPCOT, then under construction in Florida, but the company declined. Disney's **Ub Iwerks** (whose son, **Don Iwerks**, would later found **Iwerks Entertainment**, a competitor to Imax Corp.) told him that if **Walt Disney** had still been alive, he would "have grabbed the deal."

IMAX in museums

While trying to make deals with Hollywood, Ferguson was approached by **Preston "Sandy" Fleet**, who had founded the Fotomat chain of photo processing kiosks, and was then helping found the Reuben H. Fleet Science Center in San Diego (named for his father, an aviation pioneer). The center was to have a planetarium, and he asked Imax to adapt its projection system to show movies on the dome to augment star shows. Although Ferguson, Kroitor, and Shaw had imagined such a system for the Cinesphere, they hadn't had the time or resources to implement it. With a client ready and willing to support it, OMNIMAX, as Fleet dubbed it, became a reality and the first institutional IMAX theater opened on March 10, 1973.

But the young company was still in trouble; a new theater every other year wasn't enough to support it, so Kroitor returned to the National Film Board, and Kerr left to run for mayor of Cambridge, ON. With part-time assistance from **Peter Crane** and **Michael Sullivan**, Ferguson focused on marketing the system to clients who could make their own films and run them indefinitely, principally museums and theme parks. Over the next few years, theaters opened at the **Circus World** theme park in Florida and Ohio's Cedar Point Amusement Park, as well at the 1974 World's Fair in Spokane, WA.

Apollo 11 astronaut **Michael Collins** was the first director of the Smithsonian Institution's National Air and Space Mu-

*(see **FERGUSON** on page 6)*

L to r: Roman Kroitor, Graeme Ferguson, Robert Kerr, Barbara Shaw at a memorial for Bill Shaw in 2004.

*(from **FERGUSON** on page 5)*

seum, then being planned for the national mall in Washington, DC. He expressed interest when Ferguson pitched the idea of an IMAX theater for the new building, but wouldn't commit without seeing it. Collins wasn't allowed to accept a free ticket to Toronto from Imax, but was set to give a speech at the Spokane fair. So Ferguson sent Shaw to Spokane with instructions to make sure Collins saw ***Man Belongs to the Earth***, the IMAX film Ferguson had made for the United States Pavilion. Shaw and Collins, both engineers, got along very well, and Collins agreed to install IMAX in the museum.

Francis Thompson was selected to make the signature film for NASM, but had also been commissioned to make a film for the IMAX theater at the **Living History Theater** in Philadelphia, PA, opening simultaneously with NASM in the bicentennial year. So he handed the Smithsonian project over to a young production company that had specialized in surfing movies and aerial cinematography. Thus MacGillivray Freeman Films made ***To Fly!***, which opened in the Samuel P. Langley IMAX Theater on July 4, 1976.

NASM and *To Fly!* were successful beyond anyone's expectations. The museum building had been designed to accommodate annual attendance of two million, but in its first year exceeded ten million, and would maintain that average for the next few decades.

After one year, *To Fly!* had been seen by more than 1.5 million in the 500-seat theater, and it would remain the only film on the schedule for nearly three years. The theater ran at full capacity most of the time, making *To Fly!* at NASM the first exposure to IMAX for millions of people from all over the world.

The tremendous success of the museum and the film changed everything for Imax Corporation. A new market opened up for the company, as museum directors flocked to Toronto, hoping to repeat NASM's results. Although theme parks and world's fairs would remain a significant portion of Imax's theater business for the next few decades, by 1983 institutional IMAX theaters outnumbered the other segments; ten years later there were twice as many museum theaters as commercial.

As Imax became more financially secure, Ferguson, while remaining president of the company until 1990, had more time to focus on filmmaking. In 1982 he produced and directed ***Hail Columbia!***, about the U.S. Space Shuttle program, beginning what would become a series of eight space films. Starting with ***The Dream Is Alive*** (1985), the Imax space team, including Ferguson, associate producer Phyllis Ferguson, editor **Toni Myers**, and cinematographer **James Neihouse**, would send 15/70 film cameras into space, training the astronauts not merely to operate them, but to be cinematographers and directors. Stunning and unprecedented footage shot on orbit would be featured in seven more films over the next three decades, with Ferguson credited as executive producer, producer, director, or writer.

Astronaut **Susan Helms** credits *The Dream Is Alive* for inspiring her to become an astronaut; years later she appeared in the ***Space Station 3D*** (2002).

Between 1994 and 2009, Ferguson also served as producer on three underwater films made with director **Howard Hall.**

Last year he was diagnosed with throat cancer and began radiation treatments in Toronto, making the two-hour drive from his home on the Lake of Bays in Muskoka, ON. In his typically stoic manner, he told *LFX* last fall that he enjoyed the opportunity to read on the daily trips.

Following the death of Phyllis in March, he was cared for in his last few weeks by his daughter, Allison, a nurse. As reported by the Toronto *Globe and Mail,* "He maintained his usual practical outlook and even a cheery disposition. 'He felt that he'd lived such a long and productive life and done all the things he wanted to do,' [son] Munro Ferguson said. 'He could look back without regret.'"

Ferguson is survived by his children, Munro and Allison Ferguson, four grandchildren, one great-grandchild, and his siblings, Janet Kroitor, Mary Hooper, and Bill Ferguson.

Ferguson received the Kodak Image Award from Beverly Pastercyk in 2005.

Photo courtesy of James Neihouse...

Honors

Ferguson received numerous awards, including a Genie Special Achievement Award for outstanding contributions to the Canadian film industry in 1986 and the Royal Canadian Academy of Arts Medal in 1990. He was named a member of the Order of Canada in 1993 and received an honorary doctorate from the University of Bradford (UK) in 1994. In 2005 he was the recipient of the Kodak Vision Award from the **Large Format Cinema Association**. In 2012, the Giant Screen Cinema Association presented its Special Recognition Award to the Ferguson and the IMAX Space Team, and in 2016 the GSCA presented him with its inaugural Outstanding Achievement Award. Also in 2016, the IMAX theater network inducted *North of Superior* into the IMAX Hall of Fame.

Influence

Ferguson's last five films (the only ones for which box office data is publicly available) have grossed nearly $400 million, and it is safe to say that the other 14 on which he has official credits have earned hundreds of millions more.

But his impact is not best measured in dollars or "official credits," but rather in the creativity, vision, encouragement, and inspiration he freely gave to the entire giant-screen industry over his 60-year career. Common threads in people's remembrances (*including those in the article on page 8*) include memorable scenes from his films, his generosity, and his willingness to help colleagues and newcomers to the business. Few filmmakers in the GS world would say they have not been influenced by Ferguson and his work, even those who never met him personally. Virtually everyone who did meet him will recall his intelligence and creativity, but also his unpretentiousness and modesty.

Graeme and Phyllis Ferguson with James Neihouse in September 2019.

Beyond the effect he had on friends and colleagues in the GS business is the immeasurable impact the films he made have had on the millions of viewers, to say nothing of the millions more who have been entertained, educated, and inspired by the hundreds of other GS films made possible by the medium Ferguson and his collaborators gave the world 51 years ago.

Giant-Screen Filmography

North of Superior (1971): dir, prod, DP
Circus World (1974): DP
Man Belongs to the Earth (1974): dir, prod
Snow Job (1974): dir
Ocean (1977): dir, prod, DP
Hail Columbia! (1982): dir, prod, DP
The Dream Is Alive (1985): dir, prod
Blue Planet (1990): prod
Journey to the Planets (1993): prod
Destiny in Space (1994): prod
Into the Deep (1994): prod
L5: First City in Space (1996): prod
Mission to Mir (1997): prod
Space Station 3D (2002): prod
Deep Sea (2006): exec prod
Under the Sea 3D (2009): exec prod
Hubble 3D (2010): exec prod
A Beautiful Planet (2016): exec prod

External articles

Deadline
Giant Screen Cinema Association
Globe and Mail
Hollywood Reporter
InPark Magazine
My Muskoka (Fergusons' home-town paper)
New York Times
The Times (UK)
Wikipedia

Premiering This Summer

Dino Dana: The Movie

Produced and distributed by Sinking Ship Entertainment. Directed by **J.J. Johnson**, produced by **Eric Beldowski**, **Blair Powers**, **Christin Simms**, and **Matthew J.R. Bishop**; photographed by **George Lajtai**, CSC; written by J.J. Johnson and Christin Simms; scored by **Michael-Paul Ella**. Executive producers: J.J. Johnson, Blair Powers, Christin Simms, Matthew J.R. Bishop. Cast: **Michaela Luci**, **Saara Chaudry**, **Nicola Correia-Damude**, **Amish Patel**. 2D. 30 minutes. Release: May 2021.

From multi-Emmy Award-winning Sinking Ship Entertainment comes *Dino Dana: The Movie*, an action-packed dinosaur adventure that follows 10-year-old Dana as she tries to solve dino experiment 901: where are all the kid dinos? But before she can complete her experiment, Dana's new upstairs neighbor Mateo finds her magical Dino Field Guide, which allows him to see dinosaurs in real life too. This discovery kicks off a prehistoric journey bigger than anything Dana has ever faced before. When Mateo is dino-napped by a T-Rex, who thinks he's one of her babies, it's up to Dana, her sister Saara, and Mateo's older stepbrother Jadiel to get him back. Along the way, Dana and her friends will race through a stampede of Triceratops, take on a Spinosaurus, get beak to nose with a Quetzalcoatlus, and come to realize that family, whether human or Jurassic, is the most important quest of all.

Remembrances of Graeme Ferguson

*The following remembrances of **Graeme Ferguson** were provided by his friends and colleagues.*

Diane Carlson, Giant Screen Cinema Consulting:

Graeme Ferguson was one of the first Canadians I met, and I would continue a nearly 40-year friendship with him. I moved to Seattle in 1980 to work at the Pacific Science Center from the Lawrence Hall of Science in Berkeley. One of the attractions the new position held was that the Eames IMAX Theater would be in my unit. So meeting one of the founders of the company was a very special occasion. I could not imagine that many years after our first meeting I would be on his boat in the Lake of Bays, Ontario.

Bill Shaw, a co-founder of Imax, had stayed at our home in the Seattle area on several occasions and had extended an open invitation for us to stay at his lakeside cottage. We finally took him up on the invitation. And one morning he said, "Let's go over and visit **Phyllis** and Graeme." So we boarded the Shaws' boat and motored over to the Fergusons' cottage.

We were welcomed by Phyllis, Graeme, and their black lab, Naiad. And soon we were on their 1902 launch, the Heather Belle. She is a beautiful classic boat, 36 feet in length. She was obviously Graeme's pride and joy, immaculately maintained and cared for. With him in the captain's chair we toured the lake and ended up at the lake home of yet another co-founder: **Robert Kerr**. Robert's home was on his own island, a tiny outcrop of rock.

After seeing their beautiful "cottages," I had a better understanding of Canadian cottage culture. And I remember that in the early years of Imax, the Toronto-based operations closed at noon on Fridays in the summer, to give staff a head start on getting to their cottages or other weekend activities.

I knew that these three co-founders had been childhood friends and that they had maintained a friendship through the founding and growth of Imax. This I thought was extraordinary. But it was amazing just what good friends they were, even in retirement. And they shared a love of boats. Robert and Bill helped Graeme with planning the renovation of the engine of the Heather Belle, resulting in a quiet electric-powered boat.

And on Canada Day during our visit, we joined the Shaws and Fergusons and their Canadian neighbors on the lake to celebrate and enjoy the fireworks. It was obvious that the Heather Belle was the belle of the lake. In August of 2018 Graeme allowed for her participation in a vintage boat show away from the Lake of Bays and she was the featured boat on the event's poster. At the time, he was working on a book about the boat. It was a treat to have boarded her with Graeme at the wheel. It was a magical time on the Lake of Bays for us.

L to r: Mary Jane Dodge, Graeme Ferguson, Diane Carlson

Reflecting on the amazing friendship of this trio, I think that it was Graeme's low-key manner and the fact that he never forgot that he was a "co-founder" that helped the friendship survive all those years. He generally got more name recognition as the head of the company, but it never seemed to go to his head.

Because of Graeme and his friends' work in the GS industry, I have had the privilege of knowing not only them but also many other wonderful Canadians. These relationships have enriched my life as have my IMAX-related travels around the world. Thank you, Graeme.

Mary Jane Dodge, MacGillivray Freeman:

I'll never forget the first time I met Graeme Ferguson. It changed my life. I was at a planetarium conference in Vancouver in 1977 and was walking through the trade show and I came across a really nice man at a table passing out brochures about something called "IMAX." I said, "IMAX, what's that?" It was Graeme Ferguson and he told me all about IMAX. That started a conversation that lasted a lifetime.

I was working at the **Hutchinson** [Kansas] **Planetarium** at the time and we were building a new planetarium and space center. I came back after that conference and proclaimed: "We have to get an IMAX!" Then I saw my first IMAX film, *To Fly!* at the National Air and Space Museum, and it was a truly life-changing experience. I was so blown away that I knew instantly that I wanted to work in the IMAX giant-screen industry for the rest of my life. It all started when I met Graeme at a planetarium conference!

Back in those days, Graeme used to visit the theaters two or three times a year. We'd talk all about the operation and marketing of the theater, and then I would pepper him with questions about IMAX filmmaking. He always had great stories. When Graeme was working on ***Hail Columbia!***, which opened in 1982, he said he was doing it so he could get the

Photo courtesy of GSCA.

IMAX camera on the Space Shuttle. Well, he sure did it! Once **NASA** saw *Hail Columbia!*, they were hooked! The IMAX cameras flew aboard the Space Shuttle and who can ever forget the first images of earth in ***The Dream is Alive***? It was so thrilling, I remember everything about it. I got to see what the astronauts saw! It was just astounding. A dream come true for all of us who wanted to be astronauts.

Graeme was a true leader, just what we needed in those early days. Everything was so dynamic back then. There was so much growth every year, with new films, theaters, technology, it was always changing and evolving, there were all kinds of ups and downs all the time. Filmmakers like **Greg MacGillivray** always talk about Graeme's leadership and great collaboration. We all needed each other to build this new industry.

I remember always looking forward to hearing Graeme speak at the annual conferences. It was kind of like a State of the Industry speech, even though we didn't call it that. He would give us an update on Imax, what was next on the horizon and his perspective on the industry as a whole. I would always leave the conference excited and confident about what was coming next.

Most of the IMAX theaters in the beginning were in museums and science centers and Graeme played a key role in that development, too. The museum world is a very different culture from commercial filmmaking, but Graeme just fit in perfectly! Museum directors could really talk to Graeme, and the more you got to know Graeme, the more you liked and trusted him. He could speak their language. As I look back at it now, I think Graeme's character, steady hand at the helm, and creativity as a film director really played a key role in the huge expansion of the giant-screen industry.

Looking back over 40 years of conversations with Graeme Ferguson, I remember the fun stuff, too. Every time we had a big premiere at the **Lincoln Square IMAX Theatre** in New York, Graeme always stayed in the booth, checking everything. So I stayed in the booth, too! Every detail mattered. He was a great mentor in that way.

Every year at the conferences, we would always talk about the new films, picking our favorite "IMAX moments" in each film, and I especially loved hearing the behind-the-scenes stories about NASA and the astronauts. But it seemed like every conversation always involved the future. He was always talking about what was coming next. What new thing was right on the horizon. That's what makes an industry thrive and grow and be successful. It's also what builds a legacy. Graeme Ferguson has a huge legacy, one that extends to the stars and back. We all got to take that great ride with him. And we all know we couldn't have done it without him.

Photo by Jim Carlson.

Graeme Ferguson's Heather Belle, a 1902 36-foot long launch.

That's what always made me look up to Graeme. He had that rare quality of knowing how to dream big and make it happen. The films and amazing images he created are still crystal clear in my memory. He took us to places that only a few can see first-hand, like looking back at our beautiful planet from space. But he was equally as profound on earth, reaching new heights as an artist. Who can ever forget that opening scene in ***North of Superior***? The camera hovering fast and low over that great lake, with that mesmerizing drum beat. It was so new, so interesting, so compelling, such a great use of the medium and the message. It was quintessential Graeme Ferguson. Heroic. Inventive. Unforgettable. Legendary. Just like the man himself."

Howard Hall, filmmaker:

Michele [Hall] and I were so sorry to hear of Graeme's passing. To say that he played an important role in our lives is understatement. I can't guess at how different our lives would have been had Graeme not taken a chance on me, an unproven underwater filmmaker, so many years ago. His gentle leadership and filmmaking style was an inspiration that has guided me throughout my career. We will certainly miss him greatly.

Gord Harris, formerly with Imax Corporation and Christie Digital

In *Think like a Monk,* author Jay Shetty describes negative forces, like ignorance, greed, lust, jealousy, distrust, hate, and fear, that pull us down towards distraction and despair, and positive forces like generosity, love, service, wisdom, and patience, that pull us up towards happiness and peace. For me, Graeme was always an exemplar of those positive aspirations: how to live one's life. And he was a true mentor to me and many other young employees of Imax Corporation in the early years.

The moment I saw *North of Superior* in IMAX at Ontario Place as a film student, I knew this was the future of film, and I strived to be hired as a summer student by Imax, eventually succeeding in 1978, which was when I first met Graeme. Although I was in awe of him and rather shy and tongue-tied, he made me, and every other new employee of the fledging startup, feel as welcome and valued as an old friend of many years.

I built projectors and cameras and shuttled parts and paperwork between headquarters in Galt and our new plant space in Oakville. He always had a kindly smile,

*(see **REMEMBRANCES** on page 10)*

NASA..

Testing the IMAX Mark II camera in zero-G in NASA's "Vomit Comet" aircraft.
L to r: David Douglas, a NASA technician, Graeme Ferguson (with camera), Gord Harris.

*(from **REMEMBRANCES** on page 9)*

a sly remark or joke, and wide-eyed interest in what I had to say, even though I was a mere film student. He was a true gentleman, treating us all with respect, curiosity, and unfailing kindness and good humor.

So "be curious, and never cease learning" is one big life lesson he and the other wonderful founders of Imax instilled in me. I remember how fascinated he was with space and science and, despite some lean times, he practically bet the company on filming the first launch of the Space Shuttle for *Hail Columbia!* Despite my greenness, he let me build and service new IMAX cameras and act as his camera assistant and tech.

I'll never forget that first launch. Graeme and I prepared to shoot the closeup telephoto shot that would follow Columbia. Back in those days the huge ten-pound inertia of the 1,000-foot load of 65mm negative was a constant limit. I dutifully loaded the camera and gave it a brief burst to slate it. But in my nervousness and excitement I must have neglected to take up the slack in the feed mag. So at about T minus 60 seconds, when Graeme framed his first shot and rolled camera, to my horror, the take-up reel snapped the film.

Instead of exploding or berating me, he calmly said, "Reload." I think I did the fastest IMAX camera threading in my life while the countdown proceeded. I turned it back over to him about ten seconds before blastoff and he calmly began shooting, capturing this incredible first launch. That's a lesson in patience and calmness under pressure I will never forget.

As Columbia arced into the sky, I was supporting Graeme by holding his belt as he leaned backwards with the massive telephone lens. The 85-pound camera, heavy 1,000mm lens, and massive tripod head would have fallen over backwards with him as he focused and followed the Shuttle with laser precision. Suddenly, his belt broke in my hands and jerked the shot! But again, no fuss or complaints: he said, "Grab my pants instead," and we continued the shot. In editing *Hail Columbia*, he and **Toni Myers** simply cut away to B-roll during that jerk, then cut back to the telephoto finish as the spacecraft rocketed out of sight. Incredible patience: that was Graeme.

All of us benefited from the freedom Graeme and the founders gave us untested young guys and gals. For every problem we encountered, there was always the good faith, wisdom, and patience to encourage us to try another experiment, another approach, another vendor, another solution, until we achieved what we set out to do.

Graeme was truly generous in spirit, always helping new IMAX filmmakers with advice, leads and accessories. If a camera failed on site he and Bill Shaw would get me or another tech on a plane immediately to go and help fix it, no charge.

I don't think I ever saw Graeme do anything hastily or foolishly. Like Bill, **Roman Kroitor**, and Robert, he seemed to have an encyclopedic knowledge of history, science, environmental happenings, and how people work, or don't work. He always thought about and talked things over with the other founding fathers of Imax. And not just things filmic or artistic, but other aspects of the world as well: people, politics, and business. Sometimes when you asked him a question he would pause, look off in the distance a bit, and you would wait, wondering if he forgot the question. Then he would suddenly rattle off a brilliant angle of thought, solving the problem in a totally unexpected way.

Another trait I admired in Graeme was his open-mindedness and flexibility. As he patiently honed and crafted his films and technologies, he would often choose to defer decisions until the last possible moment, mulling things over and scribbling impossibly small notes in his tiny notebooks, because he said he might learn more later on that could lead to a better solution. This drove us a bit nuts, as it sometimes impacted staffing, schedules, or other logistical issues. But invariably he was right: something would change, leading to a better solution, and he would remind us from his excellent memory and written notes! Another good life lesson: take good notes and stay flexible and open to future options.

All of his films, and all of his teaching by example, have pulled the world upwards towards the stars, towards equality, peace, and appreciation of life on this small planet. While Trumpism, religious fanaticism, violence, intolerance, fear, and hatred of "the other" daily pull downward on our collective souls, the values and virtues Graeme embodied pull us up, towards respect for our blue planet, love of nature and our fellow creatures, good humor, education, and kindness. In fact, I see this as the main role of the giant-

screen industry: to inspire, to educate, to teach, and to love. Maybe, just maybe, if we keep up what Graeme started, we can overcome all the intolerance, violence, and mean-heartedness embodied in nine out of ten mainstream Hollywood blockbusters and films on Netflix, and the greed and short-term thinking that are destroying Earth. We will carry your torch, dear friend and teacher. But we sure miss you. End of an era. Thank you, Graeme, for everything.

James Hyder, *LF Examiner*

I first met Graeme Ferguson in the summer of 1984, shortly after I started working at the IMAX theater of the National Air and Space Museum. Production of *The Dream is Alive* was under way, and the theater often screened rushes for the astronauts and officials from NASA, whose headquarters are literally across the street from the museum.

This was the first time anyone had seen 15/70 footage shot in space, and the images were mind-blowing. I was only a part-time box office manager and felt immensely privileged just to see it, to say nothing of being in the same room with various astronauts and the co-founder of Imax Corporation and his fellow filmmakers.

In my first few years at the museum I had no role in the making of the films NASM participated in, but by the time ***Blue Planet*** was being made in the late 1980s, I was on the museum's advisory committee. What I remember about Graeme from those days was the fact that he took all comments and suggestions seriously, even those from someone in as lowly a position as mine. I was surprised and flattered that someone as important and impressive as Graeme was so open, approachable, and modest. (Other production execs I worked with over the years were not as humble, despite being nowhere near as talented!)

Years later, after I had founded *LF Examiner*, Graeme remained consistently approachable and helpful. Bill Shaw's unexpected death in 2002, at 73, motivated me to try to obtain as much information as possible about the early years of the industry from the co-founders and other veterans. Roman Kroitor and Robert Kerr agreed to interviews, and both were very helpful. But Graeme generously allowed me to interview him for many hours on several occasions, recalling his life and career in great detail. His memory for names, dates, and other minutiae was astounding and extremely helpful. (Much of the biographical detail in the accompanying article was drawn from those interviews.)

Over the last decade he would occasionally call to tell me about some news he thought I should know, or to ask me about some new development he thought I might explain. It was always a thrill to see "Norway Point ON" come up on the caller ID: *Graeme* wants to talk to *me*!

In my 37 years in the giant-screen business, it has been my privilege to have met many legendary filmmakers, including several who have shared their thoughts for this article. It has been my honor to call some of these people my friends. Among these giants, one name stands above all, not only in terms of talent, vision, and contributions to the art and to the wider world, but also for his generosity, intelligence, humility, and humanity: Graeme Ferguson. We shall not look upon his like again.

Ingrid Lae, projectionist

I was extremely saddened to hear of Graeme's passing. It feels like the end of an era, now that all of the founders of IMAX are gone. Their invention was pivotal in my career and I would not have had the job I loved for 35 years, nor met many of my friends, or had the experiences I had, in many parts of the world, were it not for IMAX.

I was just starting out as an apprentice projectionist when I first saw an IMAX film and made up my mind then that I *must* be involved with this incredible format somehow, although at the time, there were no IMAX theaters where I lived. Not long after that, two theaters were built in Vancouver for Expo '86 and I ended up working at both.

When I met Graeme for the first time, I was working as a part-time projectionist and I was in awe, but I found out that he was very down-to-earth and interested in any sort of feedback on how to make films, or the system, provide better experiences for viewers. He hung around in the projection booth with me while I shut everything down at the end of the day and then I drove him back to his hotel, chatting all the time. At the time, he was perturbed by certain scenes that induced motion sickness and was picking my brain as to how I thought that could be remedied.

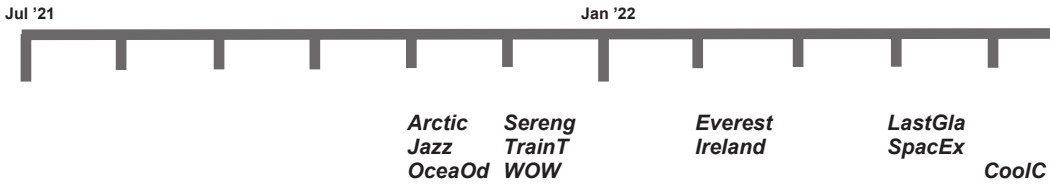
I'm still amazed by what the founders achieved with the technology, and by Graeme in particular and the creativity he showed in the films he produced.

Truett Latimer, former president of the Houston Museum of Natural Science:

Through the founding of Imax Corporation, museums and theaters around the world were changed dramatically. The addition of an IMAX theater at the Houston Museum of Natural Science caused attendance and membership to increase dramatically and helped make the museum into one of the best entertainment

*(see **REMEMBRANCES** on page 14)*

LF Examiner*'s James Hyder with Graeme Ferguson at the 2016 GSCA conference.*



* New listing.
All films are 3D unless noted; underlined titles are 2D.
Updated information is printed in **bold**.
Unless noted, all films run about 40 minutes.

The Arctic: Our Last Great Wilderness
Terra Mater Factual Studios; distributor: Cosmic Picture Distribution; directors: Myles Connolly, Florian Schulz; producers: Walter Köhler, Wolfgang Knöpfler; DP: Florian Schulz, Salomon Schulz; script: Myles Connolly, Florian Schulz, Vickie Curtis; score: Alex Heffes; executive producers: Tom Campion, Dinah Czezik-Müller, Michael Frenschkowski. Cast: Florian Schulz, Emil Herrara-Schulz, Nanuk Schulz, Silvan Schulz, Salomon Schulz, Jake Soplanda, Bernadette Demientieff, Siqiniq Maupin, Isaiah Horace. Narrators: Princess Daazhraii Johnson, Florian Schulz. ***Release: 2021.***

Jazz Fest: A New Orleans Story
Imax Corporation; distributor: Imax Corporation; directors: Frank Marshall, Ryan Suffern; producers: Frank Marshall, Ryan Suffern, Sean Stuart. 2D. 94 minutes. ***Release: 2021.***

Ocean Odyssey
Wild Pacific Media, Definition Films; distributor: K2 Studios; director: Nick Robinson; producers: Nick Robinson, Electra Manikakis, Peta Ayers; DPs: Nick Robinson, Jonathan Shaw ACS, Caspar Mazzotti; script: Nick Robinson, Peta Ayers; score: Hylton Mowday; executive producers: David Gross, Electra Manikakis, Nick Robinson. Cast: Silvia Earl. ***Release: 2021.***

Serengeti
Definition Films; distributor: K2 Studios; director: Michael Dalton-Smith; producers: Michael Dalton-Smith, Karen Gordon; script: Michael Dalton-Smith, Karen Gordon. ***Release: 2021.***

Train Time
Stephen Low Company; distributor: Stephen Low Company; director, script: Stephen Low; producer: Pietro Serapiglia; DP: Tristan Breeuwer; executive producer: Paul Globus. Narrator: Steve Anthony. 2D. ***Release: 2021.***

Wings Over Water
Dorsey Pictures, Archipelago Films; distributor: SK Films; directors, producers, script: Andrew Young, Susan Todd; DP: Andrew Young; executive producer: Chris Dorsey, Charlie S. Potter. Narrator: Michael Keaton. ***Release: early 2022.***

Everest
MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; directors: Greg MacGillivray, David Breashears, Steve Judson; producers: Steve Judson, Alec Lorimore, Greg MacGillivray; DP: David Breashears; script: Tim Cahill, Steve Judson; score: Daniel May, Steve Wood. Narrator: Liam Neeson. Cast: Araceli Segara, Jamling Tenzing Norgay, Ed Viesturs. 2D. ***Release: February 2022.***

Ireland
MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; director: Greg MacGillivray; producer: Shaun MacGillivray; DPs: Brad Ohlund, Greg MacGillivray; script: Greg MacGillivray, Manchán Magan. ***Narrator: Liam Neeson. Release: February 2022.***

The Last Glaciers
Leeson Media, Far North Productions; distributor: Imax Corporation; director, writer: Craig Leeson; producers: Craig Leeson, Malcolm Wood. 2D. Release: Spring 2022.

Space Explorers: The ISS Experience
Felix & Paul Studios; distributor: Felix & Paul Studios; directors, writers: Felix Lajeunesse, Paul Raphael; producers: Stephane Rituit, Jonathan Woods. Release: Spring 2022.

Secrets of the Sea
Howard Hall Productions, Oceanic Research Group; distributor: MacGillivray Freeman Films; directors: Howard Hall, Jonathan Bird; producers: Michele Hall, Christine Bird; DPs: Howard Hall, Jonathan Bird; script: Howard Hall; score: Bruce Zimmerman, Alan Williams; executive producers: Michele Hall, Christine Bird. ***Release: Summer 2022.***

Tiger Tiger
White Mountain Films, Kennedy/Marshall Company, Imax Corporation; distributor: Imax Corporation; director: George Butler; producers: George Butler, Keero Birla, Caroline Alexander; DPs: Reed Smoot, Tom Hurwitz; script: Caroline Alexander; score: Mark Kilian; executive producers: Julian Robertson, Frank Marshall. Cast: Dr. Alan Rabinowitz. 2D. ***Release: Summer 2022.***

Cool Cities *(wt)*
K2 Studios; distributor: K2 Studios; director: Nick Robinson; producer: David Gross; executive producers: Robert Kresser, Mark Kresser, Mark Krenzien, David Gross. Cast: Tim Jarvis. Release: 2022.

Fire Fighters
Sean Casey Productions; distributor: tba; director, DP: Sean Casey. 2D. Release: 2022.

Journey to the Great Mayan Reef
Milbrand Cinema; distributor: tba; director, producer, DP: Lance Milbrand; editor: Dave Choice; score: Icarus Music. Cast: Kathleen Dudzinski, Eldon Bolton. Release: 2022.

New England and the Sea of Stories *(wt)*
Cosmic Picture; distributor: Museum of Science, Boston; director: Daniel Ferguson; producer: Taran Davies; script: Daniel Ferguson; DP: Reed Smoot. 2D. Release: 2022.

Refuge: America's Wildest Places
Tandem Stills + Motion; distributor: tba; director, producer: Ian Shive. Release: 2022.

The Secret Life of Fungi
Stranger Than Fiction Films Pty Ltd, Definition Films, K2 Studios; distributor: K2 Studios; directors: Gisela Kaufmann, Paul Phelan; producers: Jo-ann McGowan, Jennifer Peedom, David Gross. Narrator: Merlin Sheldrake. Release: 2022.

Shark Heroes *(wt)*
Definition Films, K2 Studios; distributor: K2 Studios; director, writer: Amelia McCarten; producers: David Gross, Sarah Beard; DP: Jonathan Shaw ACS; executive producer: Mark Kresser. Release: 2022.

Mars 2080
Imagine Entertainment; distributor: Imax Corporation; director: Eliza McNitt; producers: Brian Grazer, Ron Howard, Justin Wilkes; script: Eliza McNitt, Lynn Renee Maxcy. 2D. Release: Winter 2023.

July '22 Jan '23 July '23

SOTS
Tiger

EIU FireFi JTTGMR NewEng Refuge Fungi SharkHe Mars2080 Koala Yellows EIU →

Koala
Amezdroz Media; distributor: MacGillivray Freeman Films; director, producer: Stephen Amezdroz; DP: Richard Fitzpatrick; writer: Sheryl Allen. Cast: Lizzie Corke, Shayne Neal, Jack Pascoe. ***Release: 2023.***

Einstein's Incredible Universe (wt)
Cosmic Picture; distributor: tba; director: Daniel Ferguson; producers: Taran Davies, George Duffield, Daniel Ferguson; script: Daniel Ferguson, Mose Richards; DP: Reed Smoot. Release: 2024.

Yellowstone: Life in Extremes
Grizzly Creek Films; distributor: tba; director: Thomas Winston. Release: tba.

DMR FILMS:

Title	Dist	Release
Shang-Chi	WDP	9/3/21
Venom: Let There Be...	COL	9/24/21
No Time to Die	MGM	10/8/21
Dune	WB	10/22/21
Eternals	SONY	11/5/21
Top Gun: Maverick	PAR	11/19/21
Spider-Man: No Way Home	WDP	12/17/21
The King's Man	FOX	12/22/21
The Batman	DCE	3/4/22
Doctor Strange	WDP	3/25/22
Thor: Love and Thunder	WDP	5/6/22
Mission: Impossible 7	PAR	5/27/22
Jurassic World: Dominion	UP	6/10/22
Indiana Jones (untitled)	WDP	7/29/22
Avatar 2	FOX	12/16/22

Photo by Jerry Allen. MacGillivray Freeman Films.

Howard Hall filming a giant jellyfish at Pt. Loma, San Diego, with the Red Weapon 8K camera for Secrets of the Seas.

Stephen Low with Graeme Ferguson at Toni Myers' memorial in 2019.

*(from **REMEMBRANCES** on page 11)*
and educational facilities in Texas.

Thank you, Graeme, for all you did for the museum world.

Stephen Low, filmmaker:

My favourite Graeme Ferguson story goes back to the dawn of Imax. As a teenager in a National Film Board family [son of filmmaker **Colin Low**], I was getting most of my information second-hand at the dinner table, but here goes.

As I recall the story, two 30-something filmmakers were preparing to host a Japanese delegation in Montreal. The Japanese were looking for new exhibition ideas for their 1970 World's Fair project, and the young Canadians had a big idea to sell. They rented an office space for a day or two, filling it with rented furniture and busy-looking family members and friends. But when the delegation arrived, they began the tour with a trip to the NFB studios where one of the filmmakers had a small office. Going in the front entrance they made a detour up the main stairs past dozens, or perhaps hundreds, of awards, including a row of Academy awards. The NFB was in those days a very impressive place, with giant sound stages, mixing boards, cafeterias, and they showed it off in some detail.

After lunch they went to their actual office downtown, with the busy actors making "important" calls and rushing around. The Japanese were mightily impressed with the whole experience. It must have seemed a large and very successful endeavour, and the question of who owned what was successfully fuzzy. The young filmmakers, Graeme Ferguson and Roman Kroitor, closed the deal to create the first IMAX film for the fair, and with Graeme's high school friends, engineer Bill Shaw and businessman Bob Kerr, proceeded to create an entire new industry inspired by and sustained by ingenuity, creativity, and the highest possible standards.

It's quite possible my memory of this story is not completely reliable but, anyway, it sums up what I loved about Graeme and the other founders, and working in the medium they invented and the industry they created. You have a great idea that you believe in, even if no one else does, and you just throw yourself at it with everything you have. I was fortunate enough to progress from IMAX-adjacent teenager to actual IMAX filmmaker, and although as a Montrealer I had a closer relationship with Roman, I still count myself lucky to have had a half-century relationship with Graeme, beginning with working for him as an aspiring young filmmaker and ending as two oldies, with dozens of films between us, grateful to be sharing stories and memories, encouragement and advice. He will be dearly missed.

Mike Lutz, Evans & Sutherland:

Bringing giant-screen films with pristine images to the world required passion and talent from a cast of thousands: production teams lugging around Volkswagen-sized cameras, post-production perfectionists, magnificent storytellers, programming/marketing campaign geniuses, heroic film projectionists, and many more.

At the center of those thousands was Graeme Ferguson. He was the leader of the leaders. Imax's spectacular art and commerce successes were the result of Graeme's sheer force of will. As a result, hundreds of millions of people traveled to the International Space Station, to the bottom of the ocean, and everywhere in between.

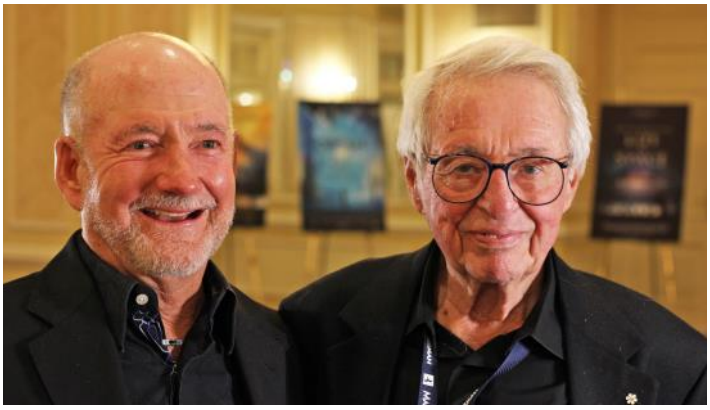
I did not meet Graeme until many years after he had retired. Yet he continued to inspire me and many others with his passion, commitment, energy, wisdom, and wit. To say the least, an Imax institutional digital theater salesperson did not have much meaning to him in 2011 and a former IMAX digital theater salesperson had even less meaning to him in 2019, but he still came across the room to greet me, remembered my name, and even recognized me in the restaurant lobby before I recognized him.

Thank god for Graeme Ferguson. That's the guy I want to be. Many people feel that way. His vision, his dedication, will flow through the giant-screen world and beyond for many years. And that world will be a better place for it.

Greg MacGillivray, filmmaker:

When **Jim Freeman** and I first met with Graeme back in 1974 as we were beginning the production of our first IMAX film ***To Fly!***, he could not have been more helpful. He guided us with ideas for how to structure the film and helped us whenever we ran into problems. I'll never forget the day Jim and I flew to Toronto to meet with the Imax founders. We were there to discuss improvements to a new IMAX camera we needed to shoot *To Fly!* We all went to Ontario Place to watch the only other three IMAX films in existence, then to Imax's offices where we sat on camera boxes in the garage. Jim made a proposal to Graeme and Bob [Kerr]: "If we come up with enough money to build three new IMAX cameras, can you build them in six months so that our team can make two new IMAX films for the 200th anniversary of the Declaration of Independence?" Their faces lit up. "Let's start now!" they said. The cameras were done early. Jim and I went off to make *To Fly!*, and our partner, **Francis Thompson**, who had raised the money for the films, made the epic 50-minute IMAX film ***American Years*** for the temporary IMAX theater [at the Living History Center in Philadelphia].

Photo by Powys Dewhurst.



Greg MacGillivray with Graeme Ferguson.

One thing that impressed me was that Graeme always wanted to share the limelight with others. He was the co-founder of Imax along with his boyhood friends, Bob Kerr, Bill Shaw, and Roman Kroitor, who are all recognized as pioneers of the best motion picture experience ever conceived. Happily, I was able to exchange many emails with Graeme these past few years as he contributed stories and ideas to the book I'm writing about my filmmaking adventures over the past 60 years. Graeme figured in many of those adventures, and I was able to express to him how grateful I was for his help, and how grateful our industry is for his guidance and creativity. He and his wife Phyllis will be missed dearly by me and by everyone at our company. He was one of my heroes, and it saddens me deeply that he is not here to help guide us further.

Ian McLennan, planetarium and museum consultant

I had the privilege of knowing Graeme Ferguson both as a young, ambitious, and visionary filmmaker, and many years later as an elder statesman in the giant-screen film industry. Graeme was a proud Canadian (recipient of the Order of Canada), but also had a global perspective and urgent sense of mission. His pioneering work with the U.S. space program resulted directly in millions of people appreciating the beauty and wonder of the cosmos.

I first met Graeme soon after I was appointed managing director of Ontario Place, Toronto. That was the home of the world's first permanent IMAX theatre, and Graeme's wildly successful *North of Superior* had premiered there. Graeme was deeply concerned about preserving the unique qualities of IMAX in terms of any future productions, both for Ontario Place and beyond. At one point, we agreed it would be fun to create an IMAX experience whose only objective was to get people to laugh. Thus was born the idea of a film called ***Snow Job***, a slapstick comedy about a hapless school bus driver (played by the hilarious comedienne, the late Barbara Hamilton) in the rugged Canadian winter.

Graeme was widely known throughout his life as a serious guy. No small talk with him! However, I recall with great fondness (and a bit of nostalgia) the two of us laughing uproariously at some of the dailies coming out of the *Snow Job* shoot. That is an image of Graeme Ferguson I won't soon forget, partly because it was so at odds with his usual even and dignified demeanour.

One of the memorable occasions involving Graeme Ferguson at Ontario Place was the visit by the famous American broadcaster/adventurer, **Lowell Thomas.** In the 1950s Mr. Thomas had been involved with the wide-screen invention called **Cinerama**, and he was interested in a tie-in with Imax. I helped facilitate that meeting, which was held at Ontario Place. They remained in touch some time after that, although neither a technical nor corporate fusion ever took place.

Photo courtesy of Ian McLennan.

L to r: Graeme Ferguson, Ian McLennan, Lowell Thomas, circa 1972.

Todd Douglas Miller, filmmaker:

The opening aerial shots set to drums in *North of Superior*, the landscape of fire in ***Man Belongs to the Earth***, the majestic shots of space shuttles in *Hail Columbia!* and *The Dream is Alive;* these films changed cinema and were the work of a true visionary: Graeme Ferguson. Along with his co-conspirators, he founded an entire industry based on technical innovation, creativity, and, most importantly, always giving the audience an experience they couldn't find anywhere else. His legacy will live on and continue to inspire for generations to come. Godspeed, Graeme Ferguson!

James Neihouse, cinematographer:

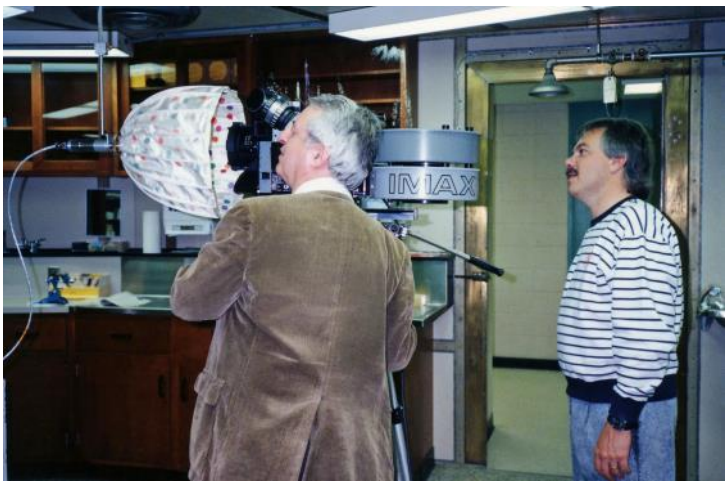
On May 8, 2021, the IMAX world lost its creator and guiding light. Graeme Ferguson, the last surviving founder of Imax Corporation, passed away, peacefully, at his beloved Norway Point home on the Lake of Bays in Ontario, Canada.

How do you sum up a 45-year friendship in a few words?

I first met and worked with Graeme in 1976 on the first IMAX underwater film, ***Ocean***. Graeme was directing the film for the Reuben H. Fleet Space Theater (now the Fleet Science Center) in San Diego, I was fresh out of film school and totally enthralled with this new movie format. Getting to meet, let alone work with, one of its inventors was beyond my wildest dreams.

The same year we were working on *Ocean,* the Smithsonian's National Air and Space Museum opened, with its IMAX screen being one of the big attractions. Graeme was encouraged by the museum's first director, Apollo 11 astronaut **Michael Collins**, to fly the IMAX camera in space. Collins believed that IMAX was the best way to share with the public the beauty of the Earth from space. He said that the Space Shuttle would be the per-

*(see **REMEMBRANCES** on page 16)*



Graeme Ferguson and cinematographer James Neihouse re-shooting a NASA motion sickness experiment for Destiny in Space.

Photo courtesy of James Neihouse.

*(from **REMEMBRANCES** on page 15)*

fect way to get the big camera into orbit. Graeme's response: "That's a great idea, but what's a Space Shuttle?"

After *Ocean* I had the privilege, no, honor, of working on most of Graeme's IMAX films. He brought me in to help shoot Shuttle launches and ground footage for *The Dream is Alive*, and it was through that project that I met my wife, Leslie, who worked for NASA Public Affairs at the Kennedy Space Center. She would guide us around during our shoots. All those early mornings in the marshes around the launch pads led to true romance, and Graeme and his wife Phyllis always took credit, and rightly so, for making that match!

The Dream is Alive was the first commercially successful motion picture to be filmed in space, and became an IMAX classic. *TDIA* was instrumental in the success of the IMAX format as well as being a tribute to courage of the astronauts following the Challenger accident. The film also inspired several people to pursue becoming an astronaut; one of them, Susan Helms, would later be featured in the IMAX ***Space Station 3D*** movie.

When it was time to return to flight after Challenger, what came to be known as the IMAX Space Team, under Graeme's leadership, was already gearing up for two more films with NASA. He asked me to help with crew training at the Johnson Space Center and I officially became a part of the Space Team. I would go on to make a total of seven IMAX space films with Graeme.

Graeme had a rich and amazing life that was well lived.

As a young assistant cameraman working on a film in India he was forced to shoot a man-eating tiger that was charging at him. He told me this story as I was prepping for a film about wild tigers in India.

While filming in the Arctic he and his crew had to throw all of the camera gear out of a failing aircraft in an unsuccessful attempt to stay airborne. They eventually made an emergency landing and endured the cold for several days before being rescued.

He flew on the NASA KC-135 "Vomit Comet" zero-G simulation aircraft during testing of the IMAX camera for space flight.

I gave him a crash course in SCUBA diving so he could see what was being shot underwater for *Ocean*. We watched rushes in the Casino Theater on Catalina Island lying on the stage in front of the screen so we could get a pseudo-IMAX view.

In 1993 as Leslie and I were expecting our first child, Graeme, quite seriously, offered to film the birth in IMAX 3D. Leslie respectfully declined his generous offer; we did, however, name our new baby boy Joseph Graeme, after my father and Graeme Ferguson.

In 1989, we weathered Hurricane Hugo in Charleston, SC, after chasing it up the coast from Jacksonville, FL. We spent the next few days documenting the destruction for ***Blue Planet***.

Graeme received a Silver Snoopy Award from the astronauts. This award is given exclusively by astronauts to less than 1% of eligible support personnel in recognition of outstanding contributions to mission safety and success. The letter that accompanies the award is usually signed by only one astronaut, Graeme's was signed by more than 25.

We spent many long hours of flight support together "on console" at the various NASA space centers during the times we had a camera on orbit. We were always the daylight/awake shift — when the astronauts in orbit are awake and working — so we had to be constantly aware of what was being said on several communication channels. The last thing we wanted to hear was "Houston for IMAX, we have a problem..." Fortunately we didn't hear that very often, because of the meticulous thought and preparation Graeme and the team did before flight.

He was a diligent note-taker, and always carried a small, leather-bound notebook and mechanical pencil in the pocket of his signature seersucker jacket. He considered himself a Luddite, and preferred the analogue world. His pocket journals were crammed full of minuscule handwriting, notes on his films, on IMAX, on everything. Ironically, he called these little treasures his Random Access Memory; the term fit. He taught me the importance of testing new ideas and techniques, fixing it in "pre" not in "post."

Passionate about storytelling, a perfectionist, an explorer, Graeme always wanted to share his discoveries with the world in a manner never before seen. He wanted the audience to experience his stories in a personal way, and the giant IMAX screen was his canvas.

Graeme was a true visionary, a remarkable filmmaker, a "foodie" before there was such a thing (we shared many wonderful meals and lots of great wine), and a wonderful human being. He loved cruising Lake of Bays in his classic antique wooden boats, he was constantly inquiring about what fun cars I had driven recently, or what new camera technology might be useful for Imax. He was always available when you needed advice, and was very supportive of the giant-screen cinema world.

He believed in me, and helped me grow as a filmmaker. He made me feel that my input was important and listened to my crazy ideas. He was always ready with praise when deserved, but more importantly with constructive criticism when needed.

He was a supportive mentor, and a wonderful friend. I shall miss him immensely.

Kathy Sullivan, former astronaut, former director of COSI Columbus:

My favorite memory of Graeme has to do with the scene in *The Dream Is Alive*, where **Dave Leestma** and I, spacewalking out in the cargo bay, float up into the aft windows and wave to our crew mates inside the shuttle cabin. We got that idea when Graeme brought us to the National Air and Space Museum in Washington, DC, to see the rough cut of the still-in-progress film. The aim of the trip was to sharpen our sense of how the scenes from our flight would fit into the storyboard and complete the film. The STS-41D footage included a cool shot looking out the aft and overhead flight deck windows to the Earth sliding by below. We thought the angle was really cool and then realized, "we could shoot that with people looking in the windows!" We kept the idea entirely to ourselves; never said a word to the IMAX team. I think we knew within seconds when that scene came out of the processor, though, because our phones lit up with ecstatic calls from Graeme and Toni [Myers]. I still chuckle every time I see it, partly recalling their great delight and partly laughing at myself, the geologist who gave her crew mates a quick wave and then turned to look back at the Earth below.

Derek Threinen, Giant Screen Films/D3D Cinema:

I'm saddened to hear of the passing of visionary filmmaker and Imax co-founder Graeme Ferguson. I recall reading an interview with him in Time magazine in 1976 when I was eight years old, and subsequently haranguing my parents ceaselessly about stopping in Washington, DC, during a family road trip between Ottawa and Florida so we could experience IMAX: an image so large and so clear, I'd read, that it felt like you were in the film. While the entire day's tickets were sold out by the time we arrived at the box office on the day we visited — even though it was only around 11 in the morning — and I'd have to wait until 1989 for my first IMAX experience, I was thoroughly enchanted.

It was through a fortunate series of events that I found myself telling Graeme that story eight years later at my first giant-screen industry conference in 1997. Over the subsequent years, it was always a treat to hear his stories of the early days and to catch a rare retrospective screening of the amazing films he produced, directed, and/or shot. Rest easy, sir. Your legacy will continue to live on in the incomparable experiences offered by the giant-screen cinema network, and in the work of all the filmmakers you inspired.

Douglas Trumbull, filmmaker, special effects artist:

As a filmmaker myself, I was profoundly impressed by Graeme's work, and was often brought to tears by its beauty, particularly his diligence in getting IMAX cameras into space. This was extraordinary, and when the actual astronauts saw his shots, they reported that the experience was more powerful than actually being there, since they could relax and enjoy the spectacle rather than focus on tasks.

It is that feeling for spectacle that shaped Graeme's vision, and I will forever be grateful that I had the good fortune to help bring Imax into the commercial realm along with **Brad Wechsler** and **Rich Gelfond**. The Imax IPO changed my life forever, and I hope it was good for Graeme as well.

Graeme Ferguson, immersive cinema visionary. Thank you for everything.

Wesley Wenhardt, museum executive

Back in the late 1990s when I was working at the Canadian Museum of Civilization [now the Canadian Museum of History] in Gatineau, QC, with its director, **George MacDonald**, Imax founders Graeme Ferguson and Bill Shaw would often drop in and visit. They'd arrive by boat and tie up at the Gatineau marina. The connection between the three was long lasting, as they had been boyhood friends growing up in Galt, Ontario, together.

The museum, under the leadership of Dr. MacDonald and **Frank Corcoran**, hosted an International Space Theater Consortium conference in 1991, and often participated in film projects, including ***The First Emperor of China***, ***Mysteries of Egypt***, and ***Titanic***. Because of the theater's dual-screen system — flat and dome — filmmakers could view their footage in both formats in one visit.

One summer afternoon, Graeme Ferguson arrived by boat to see Dr. MacDonald and we all ended up discussing a potential film project. To continue the conversation, George picked up the phone and called his delightful wife Joanne and asked, Could there be guests for supper? Graeme and I were invited to their country farm house in Cantley, QC. George often invited guests and Joanne gracefully added another plate or two and greeted us warmly. Both Graeme and George carried on chatting and invited my participation with courtesy and smiles.

I shall never forget as I sat there in the midst of the stimulating conversation, dining on delicious BBQ hamburgers, that here were two distinguished and accomplished men, leaders and innovators in their own fields, discussing world issues, and here I was, fortunate enough to be in their company. And at the end of the day, when discussing ideas they were passionate about, they were just two lifelong friends enjoying each other's friendship and conversation.

Kathy Sullivan

NASA

Imax Q1 and Q2 results

On April 29, Imax Corporation reported its financial results for the first quarter ending March 31, 2021. The company posted a loss of $14.8 million (–$0.25 per share) on revenues of $38.8 million, compared to a loss of $28.7 million (–$0.48 per share) on revenues of $34.9 million in the first quarter of 2020, the first affected by the global pandemic. In the first quarter of 2021, Imax signed deals for six theater systems, down from 15 in the same period of 2020. It installed the same number of systems in this year's Q1 as last: 12.

As of March 31, 2021, the total number of IMAX multiplex screens stood at 1,567 (up from 1,526 a year earlier); there were 12 commercial destination theaters (down from 14); and 73 institutional theaters (down from 76).

Global box office in 2021's Q1 was $110 million, the first quarterly increase since the start of the pandemic. In a conference call, CEO **Richard Gelfond** said that people were coming back to theaters, especially in Asia, and that Imax was well positioned for when moviegoing becomes common again. He announced that Imax has created a joint venture with artificial intelligence company Maximus and has been working for a year to develop AI technology for "fast, effective, and low-cost" image enhancement of content for cinema and home use. He said that the company's unique library of 15/70 material is "invaluable in teaching an artificial intelligence tool how to up-res content." Potential applications include "high-speed enhancement of library content for streaming, to real-time up-conversion of live sports and entertainment, [and] potential technologies for consumer devices." He expects that newly developed AI technology will be incorporated into IMAX Enhanced consumer products.

The company also announced that CFO **Patrick McClymont** would be leaving in May, and would be temporarily replaced by former CFO **Joe Sparacio** while a permanent replacement is sought.

On July 27, Imax reported its Q2 results for the period ending June 30, 2021. The company narrowed its loss in the quarter to $7 million (–$0.12 per share) on revenues of $51.0 million, as compared to a loss of $26.1 million (–$0.44 per share) in the same period last year. Imax signed deals for eight theater systems in 2021's Q2, down from 29 in 2020, and installed 16 systems in this year's Q2, compared to three in last year's.

As of June 30, 2021, there were 1,569 multiplex IMAX theaters worldwide (up from 1,527 a year before), 12 commercial destination theaters (down from 13), and 73 institutional theaters (down from 75), for a total of 1,654.

In a conference call, Gelfond announced that 90% of its global network is now open; China is "virtually" 100% open, North America is 95% open and operating at about 90% of capacity, and the rest of the world is 80% open and running 67% of capacity. The company has installed nearly 100 theater systems during the pandemic, and is currently installing the biggest IMAX screen in the world in Leonberg, Germany: "22 meters (72 feet) high and wider than a Boeing 737." (The wingspan of current 737 models is just under 36 meters — 117.5 feet.)

Gelfond announced before the Q2 results were announced that the company plans to nearly triple the number of IMAX screens in Japan from 39 to 100.

Hong Kong reopens theater

On July 1, the Hong Kong Space Museum reopened its Space Theatre after a 14-month, HK$30 million (US$3.85 million) renovation, the most extensive in the theater's 41-year history. Sky-Skan Europe replaced two 12-year-old Sony projectors in the Sky-Skan Definiti system with six Christie Mirage systems, for a full 8K display on the 75.5-foot (23-meter) dome. The system can project stereo 3D. The renovation also included a new sound system, a new Spitz Nanoseam dome skin, and new seats with a touch screen panel that allows visitors to select their preferred language through wired headsets.

The theater opened in October 1980 with an IMAX 15/70 film projector that is still in place and operational.

Genius 100 joins Cosmic's *Einstein*

The Genius 100 Foundation will join Cosmic Picture as executive producers on *Einstein's Incredible Universe*, a giant-screen film being produced by Cosmic. According to a press release, Genius 100 Foundation "brings together visionaries, philanthropic impact investors, and its extended global community...to reimagine the future, [and] implement creative initiatives to improve our world."

The film will follow Nobel laureate Andrea Ghez, known as the "black hole hunter," and Nergis Mavalvala, a member of the Nobel-winning team that discovered gravity waves, as they explore Einstein's ground-breaking ideas about gravity.

The production team captured the 2017 total solar eclipse with 26 cameras across seven U.S. states, and will release the film in 2024, just ahead of another total eclipse that will cross North America.

MFF partners with MetaMedia

MacGillivray Freeman Films has partnered with MetaMedia to bring its original GS films to "conventional commercial theaters and drive-ins across the U.S. and Canada for educational and group screenings," according to a press release. The deal is intended to "expand the reach of these films beyond the markets where [they] play exclusively in museum-based giant-screen theaters."

MetaMedia is "an entertainment technology company that creates next-generation technologies and new revenue-generating opportunities for content creators and cinemas." Its North American president is **Chuck Goldwater**, formerly with the **Digital Cinema Initiatives.**

THE BIZ

NEWS

Achtel 9x7 camera available in US

Australia-based camera maker Achtel Pty. Ltd. has announced that its 9x7 digital cinema camera is available for rent in the U.S. through XM2 Pursuit, a global provider of aerial camera platforms with offices in Los Angeles, Atlanta, London, Sydney, and Seoul.

According to a press release, "the 9x7 digital cinema cameras offer unparalleled image sharpness and can favorably replace 4–8 camera arrays. Using state-of-the-art latest global shutter technology, this new generation sensor features dual light-pipe technology and true correlated double sampling, allowing very low read noise and high dynamic range. The 9x7 captures images with unprecedented detail using uncompressed raw format with recording bandwidth of up to 10 GB/s, approximately 30 times more than traditional digital cinema cameras can achieve. The 9x7 footage is like a 'thick negative,' offering superior color range and accuracy even in difficult lighting conditions. The 9x7 camera is available with variety of lens options and mount systems, including LPL, PL and Panavision."

Tanya Bluto is head of ITEC

ITEC Attractions, operator of a number of entertainment and dining facilities in Branson, MO, including Branson's IMAX Entertainment Complex, has appointed Tanya Bluto as president, following the departure of longtime president Randy Brashers earlier this year. Bluto has held numerous positions within the company over nearly 20 years, most recently as VP of operations.

Tanya Bluto

Throop named Imax board chair

Darren Throop has been elected chairman of the board of directors of Imax Corporation, following the departure of Bradley Wechsler earlier this year.

PERSONNEL

Darren Throop

Throop, a member of the board since 2015, is founder, CEO, and president of Entertainment One, a film and TV production and distribution company.

The board also elected Steve Pamon to join it. A Grammy and Peabody award winner, Pamon is president and CEO of Parkwood Entertainment, which is Beyonce's management and production company.

Steve Pamon

In Memoriam: Michael Collins

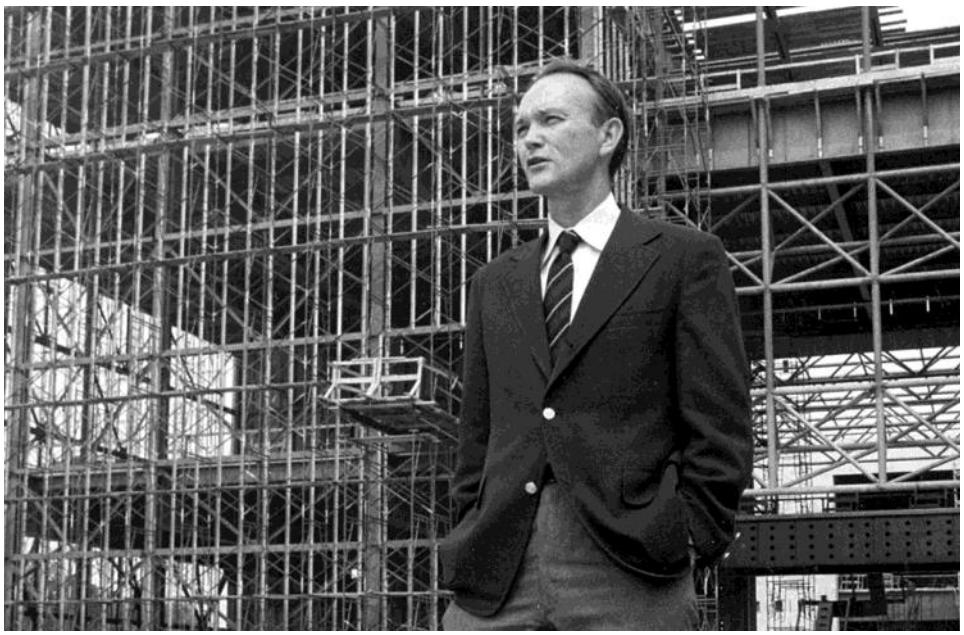
Michael Collins, Apollo 11 astronaut and first director of the Smithsonian's National Air and Space Museum, died on April 28, age 90.

Best known as the only member of the first moon landing mission who didn't walk on the moon, his contribution to the GS world was in opting to install an IMAX theater in what would become the most popular museum in the world. As recounted in our tribute to Imax cofounder Graeme Ferguson (*see page 1*), that decision, and the popularity of the theater's signature film, ***To Fly!***, turned around the fortunes of the fledgling Imax Corporation, led to the spread of GS theaters in museums worldwide, and spurred the emergence of IMAX as the premier format for short-form science documentaries.

Born in Rome on Oct. 31, 1930, Collins graduated from West Point in 1952 and was in the U.S. Air Force until joining NASA in 1963. He flew on Gemini 10 in 1966 before the historic 1969 flight to the moon, which he orbited 30 times.

After retiring from NASA in 1970 and a brief stint at the State Department, he served as director of NASM from 1971 to 1978, overseeing its development and construction. From 1978 to 1980 he was undersecretary of the Smithsonian Institution.

Along with his Apollo 11 crewmates, Collins was awarded the Presidential Medal of Freedom in 1969. He received the Congressional Gold Medal in 2011.



NASM

Michael Collins in front of the National air and Space Museum under construction, circa 1975.

Bookings: Summer 2021 by Film

141 bookings of 66 films in 69 theaters

Film	Theater	Open	Close
AfricAdv	Katowice CC	10/1/20	9/30/21
	Krakow CC	10/1/20	9/30/21
	Lodz CC	10/1/20	9/30/21
	Poznan CC	10/1/20	9/30/21
	Warsaw CC	10/1/20	9/30/21
	Wroclaw CC	10/1/20	9/30/21
AGWN	**Beijing 3D CSTM**	**1/21**	
	Las Palmas	11/10/20	6/30/21
	Oulu	**1/7/21**	**11/17/21**
	Oulu	2/9/21	7/7/21
AmazAdve	Chantilly		12/31/21
	Chicago MSI		9/30/21
	Victoria RBCM	2/6/21	6/30/21
AMMM	Orlando SC	2/21	
AncCaves	Saint Paul SMM	2/26/21	
Angkor	Gatineau	10/1/20	3/31/22
	Taichung NMNS	10/1/20	9/30/21
Animalop	Wichita EP	3/21	
AntarcSK	Birmingham AL	12/18/20	6/18/21
	Bradford	5/19/21	5/18/22
	Fort Lauderdale	7/17/21	7/16/22
	Hague	10/8/20	
	Kuwait SCK	5/12/21	11/11/21
	London SM	12/9/20	6/30/22
	Salt Lake City Clark	6/5/21	6/4/22
AOTO	Phoenix ASC	2/21	
AsterHunt	Saint Augustine	3/21	
	Saint Louis SC	10/23/20	5/31/21
	Salt Lake City Clark	**3/1/21**	**10/1/21**
BackWild	Boston NEA	8/1/20	6/30/21
	Hampton VASSC	12/18/20	12/31/21
	Hastings	10/8/20	10/16/21
	Saint Augustine	1/10/21	6/30/21
	Shanghai STM 3D		6/21
BFTB	Saint Louis SC	3/21	
BTBW	Raleigh	3/21	
Bugs	Beijing 3D CSTM	2/15/21	2/14/22
Cuba	Memphis Pink	2/13/21	
DinoDana	Fort Lauderdale	5/22/21	
DOA	Kaohsiung NSTM	10/31/20	6/30/21
	Mobile	2/21	
	Phoenix ASC	10/1/20	12/31/21
	Salt Lake City Clark	**3/1/21**	**12/31/21**
	Shanghai STM 3D	3/21	
	Shanghai STM Dome	3/21	
	Taichung NMNS	1/1/21	12/31/21
Dolphins	Mumbai NSC	11/10/20	
DreamBig	Grand Rapids Cel		
	Lansing Cel		
ExpChesa	Harrisburg	3/21	
ExtrWeat	Saint Augustine	3/21	
FOTB	Saint Augustine	1/10/21	6/30/21
	Victoria RBCM	2/6/21	6/30/21
G3DNW	Katowice CC	10/1/20	9/30/21
	Krakow CC	10/1/20	9/30/21
	Lehi	4/23/21	4/22/22
	Lodz CC	10/1/20	9/30/21
	Louisville KSC	7/1/20	8/30/22
	Poznan CC	10/1/20	9/30/21
	Warsaw CC	10/1/20	9/30/21
	Wroclaw CC	10/1/20	9/30/21
GBR	Harrisburg	3/21	
GBR3D	**Melbourne MV**	**3/21**	**3/22**
	Shanghai STM Dome	**1/21**	**2/22**
GBRF	Chicago MSI	8/1/20	
	Harrisburg	3/21	
	Kagoshima MSC	4/1/21	
	Melbourne MV	2/21	
GC	Grand Canyon DCI	9/20	12/21
GCA	Grand Rapids Cel		
	Lansing Cel		
GlobSoun	**San Jose Tech**	**1/1/21**	**1/1/24**
GWS	Boston NEA	8/1/20	
HCBTD	San Simeon DCI	7/21/20	
HidUniv	Grand Rapids Cel		
	Lansing Cel		
HumpbWha	Grand Rapids Cel		
	Lansing Cel		
IAW	Harrisburg	3/21	
	Hutchinson	3/13/21	
IncrPred	Beijing 3D CSTM	3/1/21	
Jerusale	Saint Augustine	3/21	
JIAC	Tianjin STM	3/21	
JTS	Mobile	2/21	
	Raleigh	3/21	
	Tianjin STM	3/21	
JTTSP	Regina	3/21	
Mars1001	Kagoshima MSC	4/21	
MJTTM	Chicago MSI	3/7/21	
MOF	Orlando SC	2/21	
MOTUW	Peoria RM	4/18/21	
Niagara	Niagara Can DCI	7/23/20	
NPA	Grand Rapids Cel		
	Harrisburg	3/21	
	Lansing Cel		
Ocean3D	Kaohsiung NSTM	10/31/20	6/30/21
OceanOd	**Boston NEA**	**5/28/21**	**12/27/21**
OOBP	Peoria RM	5/12/21	
Ozarks	Branson	7/1/20	
Pandas	Saint Augustine	3/21	
PlanPowe	Sinsheim	6/1/20	12/31/21
SeaLion	**Atlanta FMNH**	**4/2/21**	**4/2/22**
	Boston NEA	8/1/20	
	Edmonton TWS	5/21/21	11/21/21
	Gatineau	**4/1/21**	**10/31/22**
	Louisville KSC	**3/19/21**	**3/18/22**
	Melbourne MV	1/4/21	
	Memphis Pink	**5/29/21**	**5/29/22**
	New York AMNH	**7/1/21**	**1/2/22**
	Omaha Zoo	11/20	
	Orlando SC	**11/20**	
SFS	Pittsburgh CSC	6/24/21	12/31/22
SOE	**Guangzhou GSC**	**7/20**	**7/21**
	Shenyang LSTM	**1/20**	**11/21**
	Taipei AM	7/20	7/21
SOTU	**Hong Kong SM**	**7/1/21**	**3/31/22**
	Orlando SC	**4/1/21**	**3/31/22**
SupDogs	Chicago MSI	8/1/20	
	Shreveport	3/21	
	Singapore SC	10/20	
TA	Peoria RM	4/18/21	
TOTIA	Tianjin STM	3/21	
TTA	Grand Rapids Cel		
	Lansing Cel		
TurtOdys	Austin TSHM	9/9/20	5/31/21
	Boston NEA	10/20	6/21
	Chattanooga TA	7/17/20	12/31/21
	Orlando SC	2/21	
	Victoria RBCM	2/6/21	7/31/21
	Wichita EP	3/21	
UnderSea	Saint Augustine	3/21	
	Shanghai STM 3D	3/21	
Vikings	Tianjin STM	3/21	
Volcanoes	Melbourne MV	11/19/20	3/31/22
	New York AMNH	9/28/20	6/30/21
	Richmond SMV	12/21/20	6/30/21
	Saint Paul SMM	2/26/21	
WildAfri	Peoria RM	4/18/21	
WWDPP3D	Melbourne MV	2/21	
	Peoria RM	4/18/21	
Yell	Yellowstone	12/20	

Summer 2021 by Theater

Theater	Film	Open	Close
Atlanta FMNH	**SeaLion**	**4/2/21**	**4/2/22**
Austin TSHM	TurtOdys	9/9/20	5/31/21
Beijing 3D CSTM	**AGWN**	**1/21**	
	Bugs	2/15/21	2/14/22
	IncrPred	3/1/21	
Birmingham AL	AntarcSK	12/18/20	6/18/21
Boston NEA	BackWild	8/1/20	6/30/21
	GWS	8/1/20	
	OceanOd	**5/28/21**	**12/27/21**
	SeaLion	8/1/20	
	TurtOdys	10/20	6/21
Bradford	AntarcSK	5/19/21	5/18/22
Branson	Ozarks	7/1/20	
Chantilly	AmazAdve		12/31/21
Chattanooga TA	TurtOdys	7/17/20	12/31/21
Chicago MSI	AmazAdve		9/30/21
	GBRF	8/1/20	
	MJTTM	3/7/21	
	SupDogs	8/1/20	
Edmonton TWS	SeaLion	5/21/21	11/21/21
Fort Lauderdale	AntarcSK	7/17/21	7/16/22
	DinoDana	5/22/21	
Gatineau	Angkor	10/1/20	3/31/22
	SeaLion	**4/1/21**	**10/31/22**
Grand Canyon DCI	GC	9/20	12/21
Grand Rapids Cel	DreamBig		
	GCA		
	HidUniv		
	HumpbWha		
	NPA		
	TTA		
Guangzhou GSC	**SOE**	**7/20**	**7/21**
Hague	AntarcSK	10/8/20	
Hampton VASSC	BackWild	12/18/20	12/31/21
Harrisburg	ExpChesa	3/21	
	GBR	3/21	
	GBRF	3/21	
	IAW	3/21	
	NPA	3/21	
Hastings	BackWild	10/8/20	10/16/21
Hong Kong SM	**SOTU**	**7/1/21**	**3/31/22**
Hutchinson	IAW	3/13/21	
Kagoshima MSC	GBRF	4/1/21	
	Mars1001	4/21	
Kaohsiung NSTM	DOA	10/31/20	6/30/21
	Ocean3D	10/31/20	6/30/21
Katowice CC	AfricAdv	10/1/20	9/30/21
	G3DNW	10/1/20	9/30/21
Krakow CC	AfricAdv	10/1/20	9/30/21
	G3DNW	10/1/20	9/30/21
Kuwait SCK	AntarcSK	5/12/21	11/11/21
Lansing Cel	DreamBig		
	GCA		
	HidUniv		
	HumpbWha		
	NPA		
	TTA		
Las Palmas	AGWN	11/10/20	6/30/21
Lehi	G3DNW	4/23/21	4/22/22
Lodz CC	AfricAdv	10/1/20	9/30/21

Theater	Film	Open	Close
	G3DNW	10/1/20	9/30/21
London SM	AntarcSK	12/9/20	6/30/22
Louisville KSC	G3DNW	7/1/20	8/30/22
	SeaLion	**3/19/21**	**3/18/22**
Melbourne MV	**GBR3D**	**3/21**	**3/22**
	GBRF	2/21	
	SeaLion	1/4/21	
	Volcanoes	11/19/20	3/31/22
	WWDPP3D	2/21	
Memphis Pink	Cuba	2/13/21	
	SeaLion	**5/29/21**	**5/29/22**
Mobile	DOA	2/21	
	JTS	2/21	
Mumbai NSC	Dolphins	11/10/20	
New York AMNH	**SeaLion**	**7/1/21**	**1/2/22**
	Volcanoes	9/28/20	6/30/21
Niagara Can DCI	Niagara	7/23/20	
Omaha Zoo	SeaLion	11/20	
Orlando SC	AMMM	2/21	
	MOF	2/21	
	SeaLion	**11/20**	
	SOTU	**4/1/21**	**3/31/22**
	TurtOdys	2/21	
Oulu	**AGWN**	**1/7/21**	**11/17/21**
	AGWN	2/9/21	7/7/21
Peoria RM	MOTUW	4/18/21	
	OOBP	5/12/21	
	TA	4/18/21	
	WildAfri	4/18/21	

Theater	Film	Open	Close
	WWDPP3D	4/18/21	
Phoenix ASC	AOTO	2/21	
	DOA	10/1/20	12/31/21
Pittsburgh CSC	SFS	6/24/21	12/31/22
Poznan CC	AfricAdv	10/1/20	9/30/21
	G3DNW	10/1/20	9/30/21
Raleigh	BTBW	3/21	
	JTS	3/21	
Regina	JTTSP	3/21	
Richmond SMV	Volcanoes	12/21/20	6/30/21
Saint Augustine	AsterHunt	3/21	
	BackWild	1/10/21	6/30/21
	ExtrWeat	3/21	
	FOTB	1/10/21	6/30/21
	Jerusale	3/21	
	Pandas	3/21	
	UnderSea	3/21	
Saint Louis SC	AsterHunt	10/23/20	5/31/21
	BFTB	3/21	
Saint Paul SMM	AncCaves	2/26/21	
	Volcanoes	2/26/21	
Salt Lake City Clark	AntarcSK	6/5/21	6/4/22
	AsterHunt	**3/1/21**	**10/1/21**
	DOA	**3/1/21**	**12/31/21**
San Jose Tech	**GlobSoun**	**1/1/21**	**1/1/24**
San Simeon DCI	HCBTD	7/21/20	
Shanghai STM 3D	BackWild		6/21
	DOA	3/21	
	UnderSea	3/21	

Theater	Film	Open	Close
Shanghai STM Dome	DOA	3/21	
	GBR3D	**1/21**	**2/22**
Shenyang LSTM	**SOE**	**1/20**	**11/21**
Shreveport	SupDogs	3/21	
Singapore SC	SupDogs	10/20	
Sinsheim	PlanPowe	6/1/20	12/31/21
Taichung NMNS	Angkor	10/1/20	9/30/21
	DOA	1/1/21	12/31/21
Taipei AM	SOE	7/20	7/21
Tianjin STM	JIAC	3/21	
	JTS	3/21	
	TOTIA	3/21	
	Vikings	3/21	
Victoria RBCM	AmazAdve	2/6/21	6/30/21
	FOTB	2/6/21	6/30/21
	TurtOdys	2/6/21	7/31/21
Warsaw CC	AfricAdv	10/1/20	9/30/21
	G3DNW	10/1/20	9/30/21
Wichita EP	Animalop	3/21	
	TurtOdys	3/21	
Wroclaw CC	AfricAdv	10/1/20	9/30/21
	G3DNW	10/1/20	9/30/21
Yellowstone	Yell	12/20	

Key to Film Abbreviations

Film	Title	Year	Dist	
AfricAdv	African Adventure 3D	2007	3D	nWP
AGWN	Australia's Great Wild North	2018		K2
AmazAdve	Amazon Adventure	2017	3D	SKF
AMMM	Amazing Mighty Micro Monsters 3D	2016	3D	nWP
AncCaves	Ancient Caves	2020	3D	MFF
Angkor	Angkor: Lost Empire of Cambodia	2020	3D	K2
Animalop	Animalopolis	2008	3D	K2
AntarcSK	Antarctica	2020		SKF
AOTO	Astronaut: Ocean to Orbit	2021		MFF
AsterHunt	Asteroid Hunters	2020	3D	IMAX
BackWild	Backyard Wilderness	2018	3D	SKF
BFTB	Back From the Brink	2019	3D	CPD
BTBW	Born to Be Wild	2011	3D	IMAX
Bugs	Bugs!	2003	3D	SKF
Cuba	Cuba	2019	3D	GSF
DinoDana	Dino Dana: The Movie	2021		SSE
DOA	Dinosaurs of Antarctica	2020	3D	GSF
Dolphins	Dolphins	2000		MFF
DreamBig	Dream Big: Engineering Our World	2017	3D	MFF
ExpChesa	Expedition Chesapeake	2019		B&D
ExtrWeat	Extreme Weather	2016	3D	CPD
FOTB	Flight of the Butterflies	2012	3D	SKF
G3DNW	Galapagos 3D: Nature's Wonderland	2014	3D	nWP
GBR	Great Barrier Reef, The	1981		SMM
GBR3D	Great Barrier Reef	2018	3D	MFF
GBRF	Great Bear Rainforest	2019	3D	MFF
GC	Grand Canyon: The Hidden Secrets	1985		DCI
GCA	Grand Canyon Adventure: River at Risk	2008	3D	MFF
GlobSoun	Global Soundscapes: Mission to Record the Earth	2016	3D	FIC
GWS	Great White Shark	2013	3D	GSF
HCBTD	Hearst Castle: Building the Dream	1996		DCI
HidUniv	Hidden Universe	2013	3D	MFF
HumpbWha	Humpback Whales	2015	3D	MFF
IAW	Into America's Wild	2020	3D	MFF
IncrPred	Incredible Predators	2016	3D	GSF
Jerusale	Jerusalem	2013	3D	CPD
JIAC	Journey into Amazing Caves	2001		MFF
JTS	Journey to Space	2015	3D	K2
JTTSP	Journey to the South Pacific	2013	3D	MFF
Mars1001	Mars 1001	2021		unk
MJTTM	Michael Jordan To the Max	2000		GSF
MOF	Magic of Flight, The	1997		MFF
MOTUW	Mysteries of the Unseen World	2013	3D	CPD
Niagara	Niagara: Miracles, Myths, and Magic	1987		DCI
NPA	National Parks Adventure	2016	3D	MFF
Ocean3D	Ocean 3D	dev	3D	unk
OceanOd	Ocean Odyssey	2021	3D	K2
OOBP	Oceans: Our Blue Planet	2018	3D	GSF
Ozarks	Ozarks: Legacy and Legend	1993		IMAX
Pandas	Pandas	2018	3D	IMAX
PlanPowe	Planet Power	2018	3D	nWP
SeaLion	Sea Lions: Life by a Whisker	2020	3D	K2
SFS	Search for Snow, The	2021	3D	nWP
SOE	Story of Earth, The	2018	3D	DMD
SOTU	Secrets of the Universe	2019	3D	K2
SupDogs	Superpower Dogs	2019	3D	IMAX
TA	Tornado Alley	2011	3D	GSF
TOTIA	Titans of the Ice Age	2013	3D	GSF
TTA	To the Arctic	2012	3D	MFF
TurtOdys	Turtle Odyssey	2018	3D	SKF
UnderSea	Under The Sea 3D	2009	3D	IMAX
Vikings	Vikings	2004		GSF
Volcanoes	Volcanoes: The Fires of Creation	2018	3D	SKF
WildAfri	Wild Africa 3D	2015	3D	GSF
WWDPP3D	Walking With Dinosaurs: Prehistoric Planet 3D	2014	3D	GSF
Yell	Yellowstone	1994		GSF

Summer 2021 Bookings Count

#	Film	#	Film	#	Film	#	Film
10	SeaLion	2	DreamBig	1	Bugs	1	MOF
8	G3DNW	2	FOTB	1	Cuba	1	MOTUW
7	AntarcSK	2	GBR3D	1	DinoDana	1	Niagara
7	DOA	2	GCA	1	Dolphins	1	Ocean3D
6	AfricAdv	2	HidUniv	1	ExpChesa	1	OceanOd
6	TurtOdys	2	HumpbWha	1	ExtrWeat	1	OOBP
5	BackWild	2	IAW	1	GBR	1	Ozarks
4	AGWN	2	SOTU	1	GC	1	Pandas
4	GBRF	2	TTA	1	GlobSoun	1	PlanPowe
4	Volcanoes	2	UnderSea	1	GWS	1	SFS
3	AmazAdve	2	WWDPP3D	1	HCBTD	1	TA
3	AsterHunt	1	AMMM	1	IncrPred	1	TOTIA
3	JTS	1	AncCaves	1	Jerusale	1	Vikings
3	NPA	1	Animalop	1	JIAC	1	WildAfri
3	SOE	1	AOTO	1	JTTSP	1	Yell
3	SupDogs	1	BFTB	1	Mars1001		
2	Angkor	1	BTBW	1	MJTTM		